Chapter 12
Land Resources

12.1 Introduction

This chapter describes the impacts on land resources that would result from the construction and operation of each of the build alternatives under consideration. Section 12.6, *Applicable Regulations*, describes the applicable regulations. The subsections that follow describe the study area, the methods used to analyze the impacts, the affected environment, and the impacts of the build alternatives on each of the following land resources. The contribution of the proposed rail line to cumulative impacts on land resources is discussed in Chapter 18, *Cumulative Impacts*.

- Section 12.2, *Land Use*
- Section 12.3, *Recreation*
- Section 12.4, *Section 4(f) and 6(f) Evaluation Summary*
- Section 12.5, *Hazardous Waste Sites*

12.2 Land Use

This section describes the impacts on land use that would result from construction and operation of each of the build alternatives. The subsections that follow describe the land use study area, methods used to analyze the impacts, the affected environment, and the impacts of the build alternatives on land use. The regulations and guidance related to land use are summarized in Section 12.6, *Applicable Regulations*. The contribution of the proposed rail line to cumulative impacts on land use is discussed in Chapter 18, *Cumulative Impacts*.

In summary, construction and operation of any build alternative would result in impacts on land use primarily through the acquisition and conversion of land to railroad use and the displacement of capital improvements in the right-of-way during construction. The longer build alternatives would require more right-of-way acreage than the shorter build alternatives and would cause greater impacts on land use. Construction of any build alternative would cause the severance of contiguous properties.

Specifically, the Tongue River Road Alternative would affect the most amounts of privately owned land and grazing land and the most private properties. The Colstrip East Alternative would affect the least amount of privately owned land, and the Colstrip Alternative would affect the least amount of grazing land. The Decker East Alternative would affect the fewest private properties and residences or structures. The Moon Creek Alternatives would affect the most residences, and the Moon Creek East Alternative would affect the most structures. The Moon Creek Alternative would affect the most farmland while the Decker Alternatives would affect the least. The Moon Creek East Alternative would affect the most public land, and the Colstrip Alternative would affect the least. The Moon Creek Alternatives and Tongue River Alternatives would affect the most conservation easement lands while the Decker Alternatives would affect the least. OEA concludes that the adverse impacts of acquiring and converting property would range from moderate to high. OEA concludes that the adverse impact of acquiring and removing residences or structures would be high. OEA considers the adverse impacts on owners of conservation easements and on the severance of contiguous properties to be moderate.

12.2.1 Study Area

OEA defined the study area as consisting of land in the rights-of-way for the build alternatives, the road relocations outside the rights-of-way, and any land for which access would be limited or lost because of construction of the proposed rail line.

12.2.2 Analysis Methods

OEA used the following methods and information to evaluate the impacts of the proposed construction and operation of the build alternatives on land use. OEA consulted land

ownership maps, aerial photographs, land management plans and regulations, zoning ordinances, and other information available in the public domain. Additionally, OEA consulted with federal, state, and local agencies regarding leasing agreements, conservation easements, recreational areas, and block management programs (Section 12.3.3.2, *State Recreation Areas and Facilities*). OEA used geographic information systems (GIS) to visualize and analyze data sources to determine patterns of land use in the study area. The GIS analysis relied on spatial data from established data publishers and clearinghouses, including the Montana State Library's Montana Spatial Data Infrastructure, the Montana Geographic Information Clearinghouse, the Montana Natural Heritage Program, and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).

OEA made the following assumptions for this analysis.

- TRRC would acquire the land within the right-of-way prior to construction of the proposed rail line.
- The acquired land would shift to TRRC management for rail line operation and maintenance, and all nonrail uses in the right-of-way would be discontinued.
- These actions would permanently alter the present land use in the right-of-way.
- Construction activities would remove all residences, structures, and capital improvements inside the right-of-way.

12.2.3 Affected Environment

The existing environmental conditions related to land use in the study area are described below.

12.2.3.1 Land Ownership

As described below, landowners in the study area include federal and state government agencies; the City of Miles City, Montana;[1] and numerous private landowners (Figures 12.2-1 and 12.2-2). The rights-of-way for all build alternatives account for approximately 11,974 acres of land, and the road relocations outside of the rights-of-way associated with all build alternatives account for approximately 97 acres of land.

[1] Property owned by the City of Miles City in the study area is limited to the Spotted Eagle Recreation Area as labeled in the northeast corner of Figure 12.2-1.

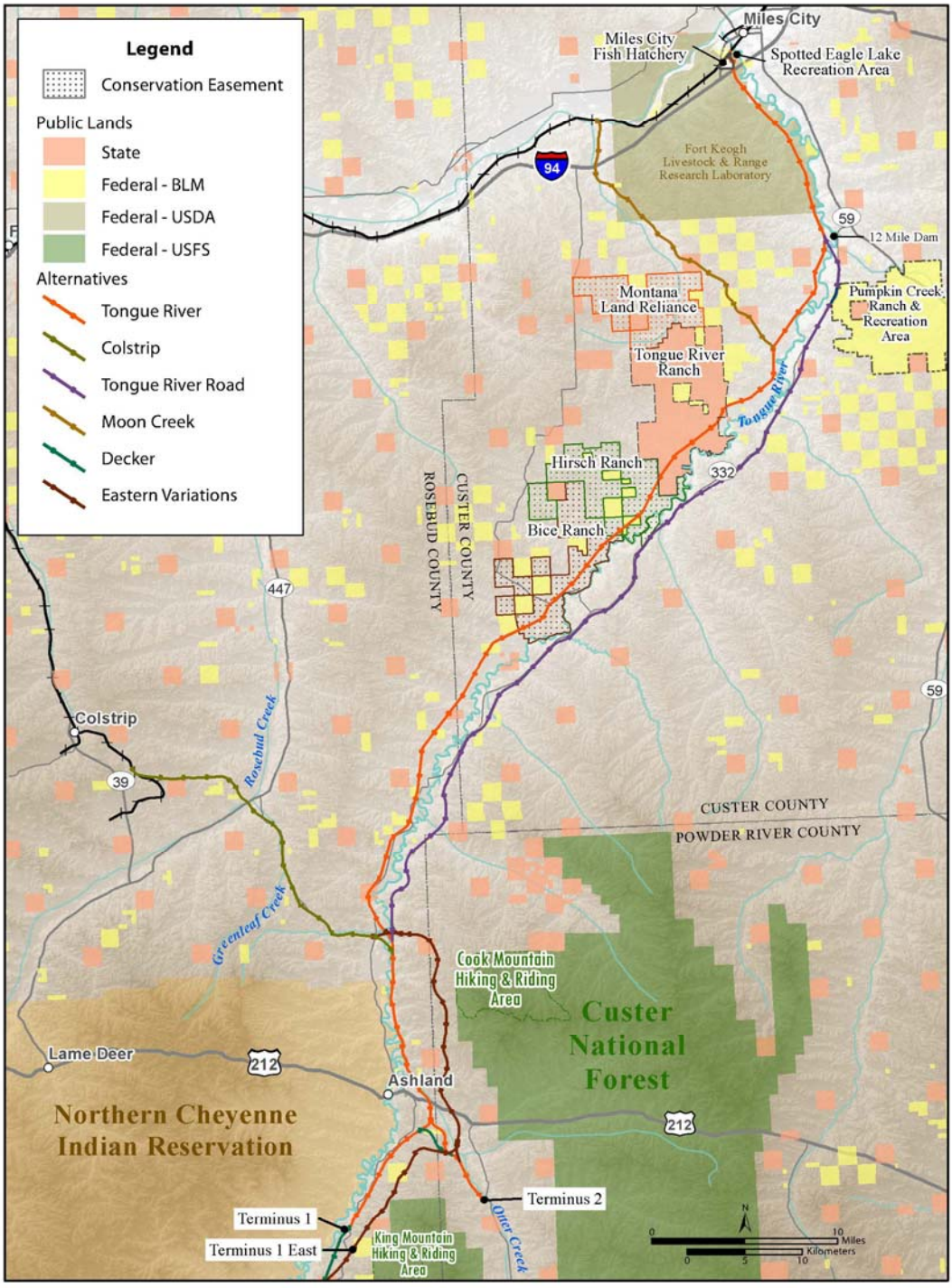

Figure 12.2-1. Land Ownership and Use, Northern Alternatives

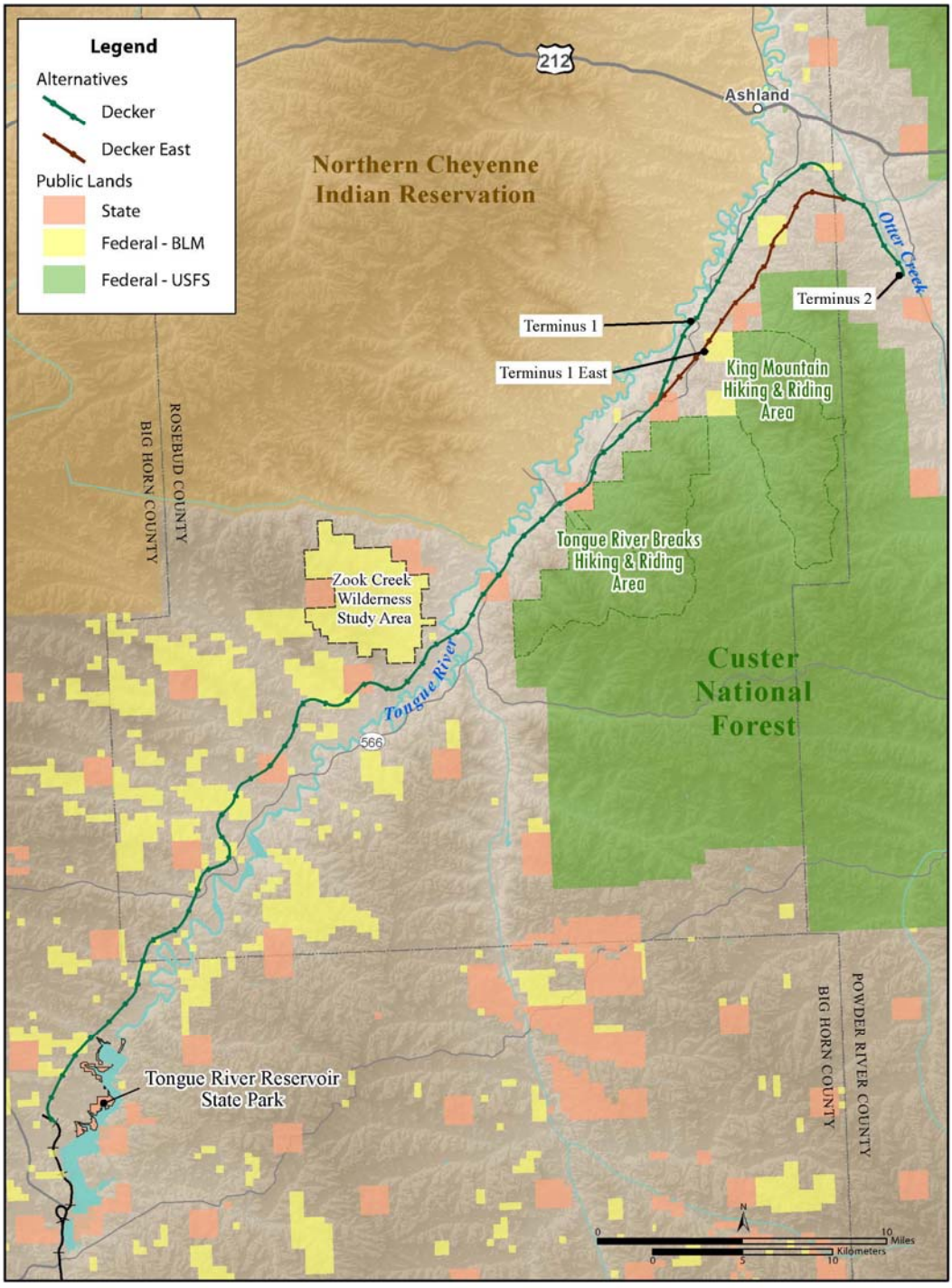

Figure 12.2-2. Land Ownership and Use, Southern Alternatives

Federal

The federal government owns approximately 1,274 acres of land in the rights-of-way, or 10.6 percent of the total acres in the rights-of-way. Two federal government agencies have jurisdiction over this land. The U.S. Department of the Interior, Bureau of Land Management (BLM) manages approximately 810 acres, or 6.8 percent of land in the rights-of-way. The BLM Miles City Field Office manages livestock grazing on BLM-administered lands. These lands are typically intermingled with private and state lands, which are grazed as a single unit. Cattle are the predominant class of livestock authorized. However, sheep and horses are also grazed on BLM-administered lands (Bureau of Land Management 2013).

The 20,578-acre Pumpkin Creek Ranch and Recreation Area (Figure 12.2-1) includes 52.8 acres within the rights-of-way. The Pumpkin Creek Ranch and Recreation Area was formed in a land exchange initiated by BLM, the Conservation Fund, and private landowners, finalized in November 2009. The exchange created a contiguous block of federal land to provide the public with hunting and recreational opportunities and to provide BLM with increased habitat and range management opportunities (Bureau of Land Management 2011).

USDA has jurisdiction over 465 acres, or 3.9 percent, of the land in the rights-of-way. USDA-owned land consists of the Fort Keogh Livestock and Research Range Laboratory (Fort Keogh). Fort Keogh was established by Congress as an army cavalry post on July 22, 1876. Because the landscape of Fort Keogh has been largely unchanged since the late 1890s, it presents unique research opportunities that are difficult to replicate at other facilities.

Today, USDA uses it as a livestock and range research laboratory. The property consists of approximately 55,000 acres, of which approximately 50,000 acres are native rangeland, 2,500 acres are dryland planted pasture, 1,000 acres are irrigated pasture, and 700 acres are irrigated cropland. The remaining acreage is made up of corrals, roads, and the headquarters building. The irrigated farming operation produces alfalfa hay, corn silage, barley grain, sorghum sudan hay, and an assortment of other barley straw and grass hays for livestock feed (U.S. Department of Agriculture 2013).

The rights-of-way cross 15 of the pastures inside Fort Keogh, including two pastures on the southwest corner of Fort Keogh and 12 pastures on the eastern side of Fort Keogh. A variety of research is conducted on these pastures, including, but not limited to, studies on the effects of grazing rotations on calf growth rates and on plant species composition. Some of the grazing research is conducted over extended periods, including study intervals of up to 80 years (Petersen pers. comm.). Eastern pastures are particularly important for ongoing operations and research at Fort Keogh as the calving of Hereford and composite cattle species occurs in this area. Additionally, hay storage facilities are located along the eastern side of Fort Keogh.

BLM and USDA own 1.1 and 1.6 acres, respectively, of land that would be affected by the road relocations outside the rights-of-way.

State of Montana

The State of Montana owns approximately 758 acres in the rights-of-way, or 6.3 percent of the total rights-of-way acreage. State of Montana lands are administered by two agencies: the Montana Department of Natural Resources and Conservation (DNRC) and Montana Fish, Wildlife & Parks (Montana FWP). DNRC has jurisdiction over 742 acres of land in the rights-of-way, including state trust land and other DNRC lands. Montana FWP has jurisdiction over 15 acres of land in the rights-of-way. The DNRC Trust Land Management Division manages Montana's state trust land resources. State trust lands are leased for agriculture and grazing, recreational uses, and oil and gas development.

The 240-acre Miles City Fish Hatchery is the only state land managed by Montana FWP, with approximately 15 acres within the rights-of-way (Figure 12.2-3). Although the hatchery was originally constructed by the U.S. Fish and Wildlife Service in 1958, Montana FWP assumed its operation in 1983. To meet expanding demands for warmwater fish, the hatchery complex was expanded in 1987. The 49 rearing ponds vary from 0.5 to 3.0 acres in size, providing over 54 water-surface acres for fish production. The Yellowstone and Tongue Rivers provide water to the facility (Montana Fish, Wildlife & Parks 2014).

The Tongue River Ranch is located in the study area and accounts for approximately 229 acres in the rights-of-way (Figure 12.2-4). In April 2007, the State of Montana purchased the Tongue River Ranch. The 20,284-acre property consists of 19,501 acres of state-owned land; the remaining acres are BLM land. DNRC manages the ranch as a working ranch and, as state trust land, distributes all revenues generated from this property annually to K–12 schools across Montana. DNRC is required under a multiple use mandate to manage the property to protect the long-term productivity of the ranch, provide a positive recreational experience to the public, maintain positive relationships with neighboring ranches, and protect the prairie environment (Montana Department of Natural Resources and Conservation 2007).

DNRC land accounts for 7.1 acres of the land that would be affected by the road relocations outside the rights-of-way.

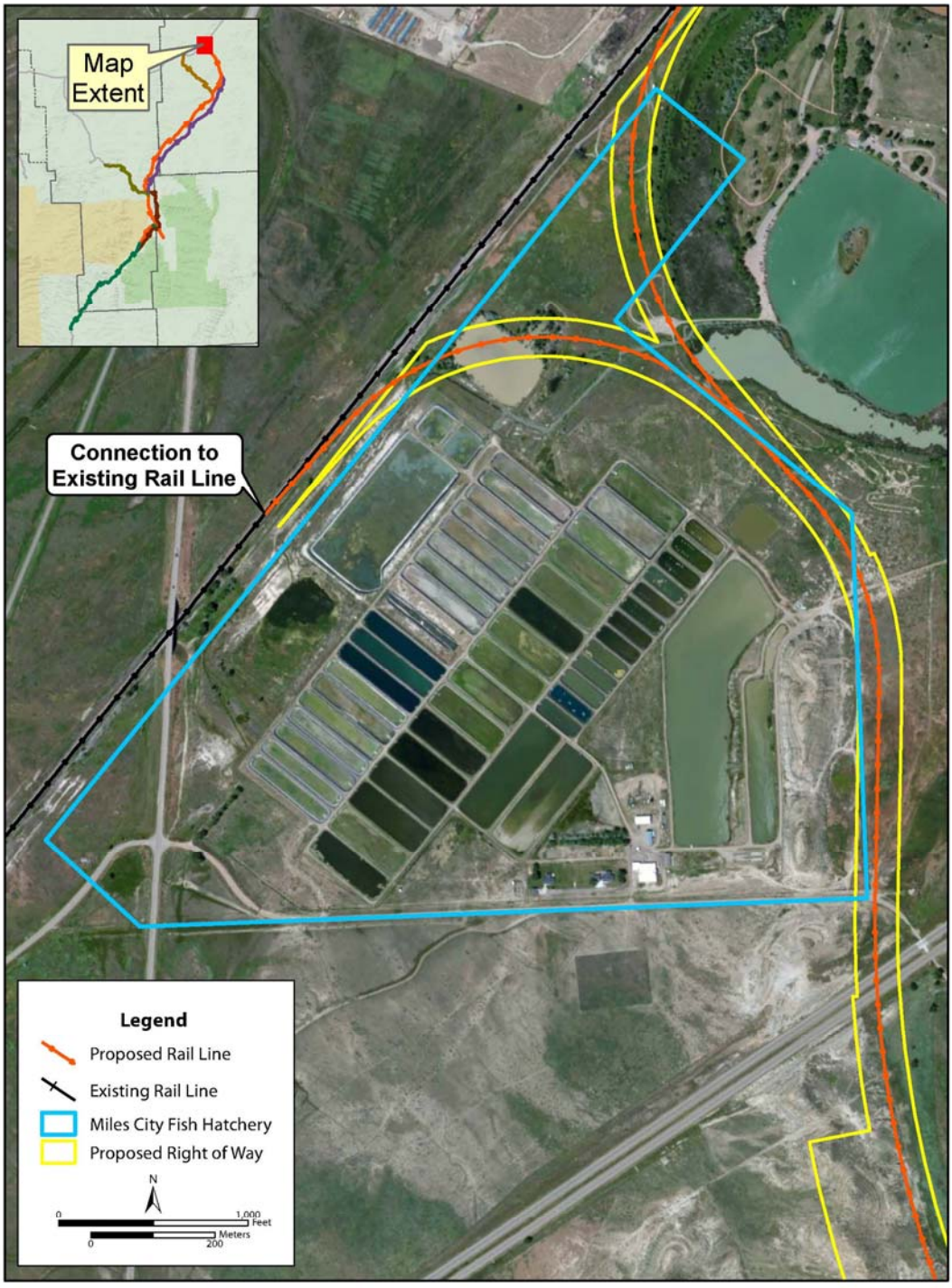

Figure 12.2-3 Miles City Fish Hatchery

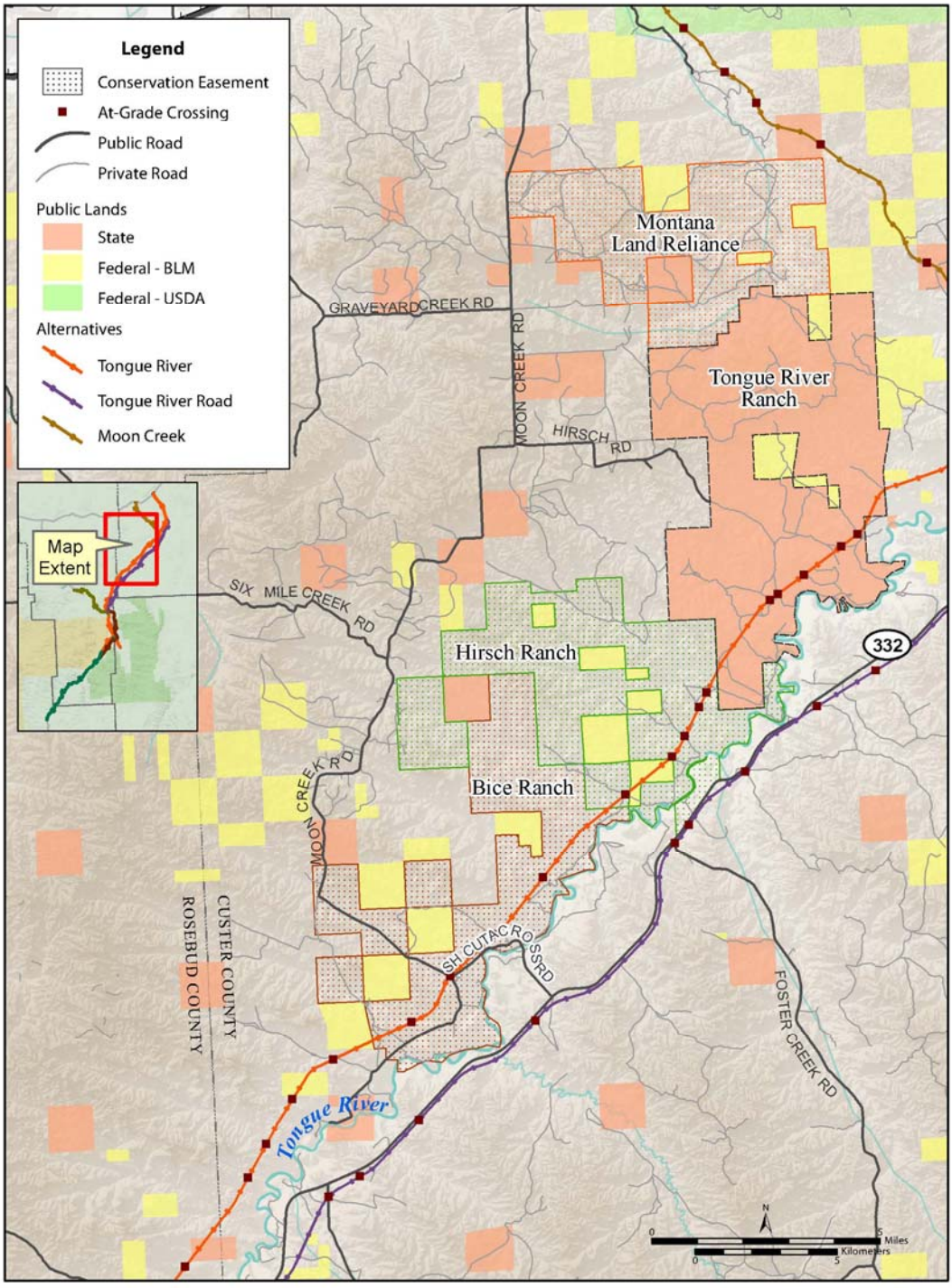

Figure 12.2-4. Conservation Easements and Tongue River Ranch Areas

Miles City

Approximately 11 acres of the Spotted Eagle Recreation Area—owned by Miles City—are in the rights-of-way (Section 12.4, *Section 4(f) and 6(f) Evaluation Summary*, Figure 12.4-1). Miles City plans improvements to enhance the recreational opportunities in the park (Miles City—Custer County 2008). The Spotted Eagle Recreation Area is described in Section 12.3, *Recreation.* No road relocations are planned on property owned by Miles City.

Tribal Land

The Northern Cheyenne Indian Reservation is in the study area. However, the rights-of-way would not cross tribal lands, no road relocations are planned on tribal lands, and tribal lands would not become inaccessible because of the proposed rail line.

Private Land

Most of the land in the study area is privately owned and maintained for agricultural purposes, including by family cattle ranching operations. Approximately 9,768 acres of private land are in the rights-of-way, or 81.6 percent of the acres in the rights-of-way. The road relocations outside the rights-of-way would affect 87.2 acres of privately owned land.

12.2.3.2 Land Uses

The majority of the study area is rural and sparsely populated. The primary land use is grazing land. Grazing land (both public and private) accounts for 10,440 acres and makes up 87.2 percent of the rights-of-way. Grazing land accounts for 90 acres of land that would be affected by the road relocations outside the rights-of-way. Irrigated and unirrigated cropland accounts for 382.5 acres and constitutes 3.2 percent of the rights-of-way. Cropland accounts for 5 acres of land that would be affected by the road relocations outside the rights-of-way. Approximately 409 acres of land in the rights-of-way and 4.9 acres of land that would be affected by road relocations outside of the rights-of-way have been determined by NRCS to possess the optimal combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops. NRCS designates these lands, if irrigated, as prime farmland. Some areas other than areas of prime and unique farmland are of statewide importance for producing food, feed, forage, fiber, and oilseed crops. Approximately 2,688 acres of land in the rights-of-way and 45 acres of land that would be affected by road relocations outside of the rights-of-way have been designated as farmland of statewide importance.

The land in the study area is also enjoyed for its natural beauty and recreational value. Hunting is a popular activity in the study area, especially in the Tongue River Valley. Block management areas (BMAs) provide free public access to hunting grounds. Eight BMAs would be crossed by the rights-of-way. Approximately 1,956 acres of BMA lands would be in the rights-of-way, and 70.7 acres of BMA land would be affected by road relocations

outside the rights-of-way.[2] Two conservation easements would be crossed. Approximately 424 acres of the conservation easements would be in the rights-of-way, and 1.9 acres of the conservation easement would be affected by road relocations outside of the rights-of-way.

12.2.3.3 Zoning

Within the study area, a number of local jurisdictions have zoning ordinances. However, only Miles City would have land uses affected within the jurisdiction of its zoning ordinance. Miles City has existing zoning, land use, and building regulations as defined by Section 24 of the Miles City Code of Ordinances (Municipal Code Corporation 2013).

12.2.3.4 Land Use Plans

The Montana Growth Management Policy authorizes local governments to prepare and adopt regulations to guide growth and development of the communities they serve. The requirements for complying with the Growth Management Policy are detailed in Montana Code Annotated (MCA) 76-1-601. Two plans for development in the study area were identified in the Miles City Growth Policy (Miles City—Custer County 2008), one of which would take place in the rights-of-way. The Miles City Growth Policy states that Miles City will develop a master plan for the Spotted Eagle Recreation Area. A draft master plan has not yet been released but is expected. The Miles City Planning Department indicates that the plan will include some undefined amount of trail development through the recreational area (Colton pers. comm.).

No development plans were identified in the Colstrip Comprehensive Growth Policy or the Big Horn County Growth Management Policy (City of Colstrip 2008, Big Horn County 2014).

12.2.3.5 Land Use Programs

OEA identified a number of programs under which land in the study area is managed by state and federal agencies. These programs are described below.

Bureau of Land Management

Grazing Allotments

The BLM Miles City Field Office is responsible for administering livestock grazing leases on all BLM land in the study area. BLM-leased land is often intermingled with private land and operated as a single grazing unit. Most of the grazing land administered by BLM is occupied by cattle operations. The Miles City Field Office conducts rangeland monitoring to ensure all grazing operations comply with Standards and Guidelines for Rangeland Health (or progress toward meeting these standards) (Bureau of Land Management 1997) or allotment

[2] See Chapter 12, Section 12.3, *Recreation,* for more information regarding BMAs and other recreational areas.

management plan standards and objectives (Bureau of Land Management 2013). Allotment management plans are land use plans that specify grazing practices on grazing allotments.

Oil, Gas, Coal, Gravel, and Sand Leases

BLM currently leases approximately 11 million acres to coal development and approximately 5.8 million acres to oil and natural gas development in southeast Montana. However, there are currently no oil, gas, or coal leases on BLM land in the rights-of-way (Bureau of Land Management 2013).

Montana Minerals Management Bureau

The Montana Minerals Management Bureau is responsible for leasing, permitting, and managing oil and gas, coal, and sand and gravel agreements throughout the state. The department conducts four lease sales each year for oil and gas leases on state lands (Montana Department of Natural Resource Conservation 2013). OEA did not identify any state oil, gas, sand, or gravel leases in the right-of-way.

Montana Department of Natural Resources and Conservation

DNRC cooperates with other federal, state, and local agencies to acquire, develop, and manage public lands. DNRC's Trust Land Management Division is responsible for administering and managing state trust timber, surface, and mineral resources. This division is also responsible for reviewing and processing applications for rights-of-way and easements across lands and navigable waters that are administered by the State of Montana. The Montana Agriculture and Grazing Bureau—part of the DNRC Trust Land Management Division— supervises lease agreements for range and cropland uses. Approximately 426 acres of land in the rights-of-way are leased by DNRC for grazing. Crops raised on state trust lands in the study area are primarily dryland hay and small grains but also irrigated grain crops, corn, sugar beets, potatoes, peas, lentils, garbanzo beans, canola, safflower, alfalfa seed, and native grass seed.

Montana Fish, Wildlife & Parks

Conservation Easements

Conservation easements are legal contracts between a land trust, a government entity, or other qualified organization and a private landowner. In exchange for a tax-deductible contribution for the value of the protected land, the easement limits certain uses (for example, subdividing the land for residential development) to protect its conservation values.

Montana FWP holds conservation easements on approximately 370,451 acres of private lands statewide, managed to preserve wildlife habitat. These easements comprise 37,298 acres in Custer County, 6,764 acres in Powder River County, 2,076 acres in Rosebud County, and 4,169 acres in Big Horn County (Montana National Heritage Program 2013).

The State of Montana has programs for both perpetual and term conservation easements, the latter of which can be granted or renewed for a minimum of 15 years. The conservation easements allow private land to remain in private ownership while ensuring that the property's natural resource value will not be compromised by incompatible land uses. Legally, conservation easements must provide at least one of three conservation purposes.

- Protection of habitat.
- Preservation of open space (including farmland or forests) for scenic enjoyment or public benefit.
- Preservation of land access for education of or outdoor recreation by the public.

Approximately 422 acres of land in the Hirsch Ranch Conservation Easement and the Bice Ranch Conservation Easement would be located in the rights-of-way, and 1.9 acres of these conservation easements would be affected by road relocations outside of the rights-of-way. These easements were both purchased by Montana FWP with the objectives of conserving riparian, sagebrush grasslands, and plains forest habitats and to protect grazing management, agricultural operations, and public hunting opportunity in perpetuity (Montana Fish, Wildlife & Parks 2001). Together, these two conservation easements account for approximately 26,301 acres of land. The 10,796-acre Montana Land Reliance Conservation Easement is located nearby in Custer County, but does not include land in the rights-of-way.

Block Management Areas

Montana FWP manages the Block Management Program to help landowners manage hunting activities and provide free public access to hunting on private land (Section 12.3, *Recreation*).

12.2.4 Environmental Consequences

Impacts on land use could result from construction and operation of any build alternative. The impacts common to all build alternatives are presented first, followed by impacts specific to each build alternative.

12.2.4.1 Impacts Common to All Build Alternatives

Construction

The following construction impacts on land use are common to all build alternatives.

- **Require Acquisition of Land and Conversion of Land Uses**

  Most of the land within the rights-of-way is privately owned (Table 12.2-1, *Land Ownership in the Right-of-Way*), as is most of the land outside the rights-of-way that would be affected by the road relocations (Table 12.2-6). If the Board authorized construction and operation of any build alternative, TRRC would acquire the right-of-

way. TRRC would manage the right-of-way for rail line operation and maintenance and all nonrail uses in the right-of-way would be only by TRRC permission. This would permanently change land ownership and existing land use designations. Common to all build alternatives, the acquisition and conversion of the right-of-way would result in the loss of public and private lands used for grazing and farmland.

The relocation of existing roads to accommodate the railroad right-of-way would also be common to all build alternatives. The impacts of road relocations on land ownership would depend on site-specific conditions for each road relocation, including the ownership of the road itself. For example, if a private road is relocated within a private property, no change in land ownership would result. However, if a state or county road is relocated onto a private property, this would result in a localized loss of private land. The relocation of existing roads could result in the abandonment of sections of the existing road. In some cases, a loss of private land may be offset if the section of road that is abandoned is transferred to private ownership and if it the areas of the abandoned and new roads are comparable.

Road relocations to areas outside the rights-of-way would permanently change the use of land by replacing existing ground cover with paved or unpaved road surface. In some locations, abandoned roads could be reclaimed or restored to a match the land use of the surrounding area.

The impacts on land ownership and land use that could be offset would be determined by where reclamation is possible and would depend on the final design of the road relocations, which has not yet been determined.

- **Cause Severance of Contiguous Properties**

  Construction of the proposed rail line could sever properties. Severance in this context is defined as the right-of-way crossing a contiguous property in such a manner as to render the property or portions of the property unsuitable for its current use.

  OEA determined that severance would occur if the following criteria were met.

  - The right-of-way crosses a contiguous property, resulting in two or more pieces of the property on opposite sides of the right-of-way. If the right-of-way runs along the border of a property and the remaining property is located entirely on one side of the right-of-way, no severance occurs.
  - For unirrigated land, the right-of-way crosses a contiguous property, resulting in two or more fragments without access between them. If there is a designated crossing of the right-of-way, the existing use of the full property (except for the land acquired and converted for the proposed rail line right-of-way) would be maintained.
  - For irrigated farmland, the right-of-way crosses a contiguous property, resulting in two or more fragments for which movement is still possible across the right-of-way. The property is severed when irrigation systems (e.g., sprinklers, pivots, and drainage

systems) no longer function on both sides of the right-of-way. This type of severance can be precluded by installing certain types of improvements (e.g., culverts that allow for continuous drainage).

OEA identified and measured the severed fragment by evaluating access to the properties and capital improvements on contiguous properties. For example, a fragment that includes a residence, barn, or other structures and that would be accessible after the right-of-way was constructed would not be considered a severed fragment. A fragment that was no longer accessible with no or little capital improvements would be considered severed from the remainder of the property if the criteria listed above were met.

In the case of farmland irrigated by drainage ditches and other gravity-fed systems crossed by the proposed rail line, water flow to the irrigated lands on the downhill side of the right-of-way would be disrupted.

- **Displace Capital Improvements**

The proposed rail line could result in the displacement of water wells or other capital improvements that are located in the right-of-way.

- **Curtail or Constrain Access to Properties**

The proposed rail line could affect land uses in the study area by creating a barrier restricting access to properties. Construction would temporarily impede movement across the right-of-way.

Once constructed, the proposed rail line could create a barrier, limiting legal access across the right-of-way to designated crossings. As part of preliminary designs, TRRC plans to install at-grade crossings of numerous private roads or drives. However, not all private roads and drives that would be crossed by a build alternative would have a designated crossing.

- **Require the Construction or Expansion of Maintenance Facilities**

TRRC has indicated that it would expand existing BNSF Railway Company (BNSF) maintenance-of-way headquarters in Forsyth. This small expansion would be necessary to support either of the Colstrip Alternatives. If any other northern alternative was constructed and operated, a similar expansion of the existing maintenance-of-way facility in Miles City would be required. If either of the Decker Alternatives were constructed and operated, a similar expansion of the existing maintenance-of-way facility in Sheridan, Wyoming would be required. TRRC has indicated that it would also construct a new 1,100-square-foot building in Ashland to support operation of the proposed rail line regardless of build alternative. TRRC has yet to identify the location for the new building, but it would be adjacent to public access and available public utilities. All facilities would accommodate train crews, maintenance-of-way, signal, and other employees as needed. Because an existing building would be used for the maintenance-

of-way facilities in Forsyth, Miles City, or Sheridan, no changes to land use would result. Because the Ashland facility would be constructed within existing city boundaries and adjacent to existing public access and public utilities, it would not result in a change of or conflict with existing land use.

Operation

The following operation impacts on land use are common to all build alternatives.

- **Increase Risk of Wildfire**

  As described in Chapter 8, Section 8.2.4.1, *Impacts Common to All Build Alternatives*, the two most common reasons for railroad-caused fires are exhaust sparks emitted from the locomotive engine and hot brake shoe fragments (California Department of Forestry and Fire Protection et al. 1999). Train exhaust sparks are most likely where idling occurs or where the track grade would change.

  Each of the build alternatives would require at least one siding (locations would be determined during project design), which would increase the potential for locomotive carbon particle buildup and emission, leading to an increase in the potential for a wildfire ignition. The locomotive would also be stopped or operating at minimum power at the mine site where coal would be loaded into rail cars. Many grade changes would occur over variable lengths along all of the rights-of-way (Chapter 13, Section 13.3.1, *Topography*) and could cause carbon particle buildup and emission, leading to an increase in the potential for a wildfire ignition. With the advent of composition brake shoes, brake shoe sparks and fragments are much less common as the cause of fires, unless the shoe is worn out (California Department of Forestry and Fire Protection et al. 1999).

  A review of wildfire records in Montana indicates that railroads can start wildfires, but the occurrence and acreages burned are very low compared to wildfires from lightning and other human causes (Chapter 8, Section 8.2.3.2, *Wildfire Ecology*, Table 8.2-3). If a train-caused wildfire were to start, it could affect land use in a number of ways. Ranches and farms affected would temporarily lose existing uses until prefire conditions are restored, which could take years in some cases. If severe, wildfires can destroy homes, barns, corrals, and other capital improvements and result in injury or death of livestock.

  While Montana law requires railroads to control fire hazards in the right-of-way (Chapter 8, Section 8.6, *Applicable Regulations*), railroad-caused fires could spread beyond the right-of-way because of unpredictable and uncontrollable factors that influence wildfire behavior (Appendix I, Section I.1.2, *Wildfire Behavior*). This uncertainty makes it difficult to predict if and where a wildfire would be ignited by a railroad, regardless of the exhaust sparks and brake sparks that could be emitted from a train.

- **Contribute to Weed Propagation**

  Rail operation could result in the spread of weeds in the study area (Chapter 8, Section 8.2.4.1, *Impacts Common to All Build Alternatives*), which could displace grasses on which livestock graze. Crops actively managed and cultivated in the study area would also be affected by the introduction of weeds. These impacts could alter agricultural land uses.

- **Disturb Livestock**

  Wayside noise and train horns during rail operation could result in avoidance responses from livestock in areas adjacent to the right-of-way. However, the areas where the noise levels would result in livestock disturbance would rarely extend outside the right-of-way and, at most, would be limited to areas adjacent to the right-of-way. In these locations, livestock might avoid grazing on adjacent land due to rail traffic noise.

12.2.4.2 Impacts by Build Alternative

The impacts on land use that are specific to each build alternative are described below and are represented in the following tables and figures.

- Table 12.2-1 lists the amount of land by owner classification in the right-of way for each build alternative.
- Table 12.2-2 presents the current land uses in the right-of-way for each build alternative.
- Table 12.2-3 presents impacts on privately owned land in the right-of-way (property and capital improvements) and estimated amounts of severed land for each build alternative.
- Table 12.2-4 identifies the area of special farmland designation in the right-of-way for each build alternative.
- Table 12.2-5 presents the area of conservation easement lands and DNRC lease land in the right-of-way for each build alternative.
- Table 12.2-6 presents the current land ownership that would be affected by road relocations to outside of the right-of-way for each build alternative.
- Table 12.2-7 presents the current land uses that would be affected by road relocations outside of the right-of-way for each build alternative.
- Figures 12.2-5 through 12.2-9 identify the residences and other structures that would be displaced by the rights-of-way for the build alternatives.

Table 12.2-1. Land Ownership in the Right-of-Way (acres)

Build Alternative	Total[a]	Private	Federal Land		State Land		Miles City	No Data[b]
			BLM	USDA	DNRC	Montana FWP		
Tongue River	3,783	2,969	129	347	306	15	11	5
Tongue River East	3,803	2,856	196	347	371	15	11	7
Colstrip	2,040	1,949	28	0	40	0	0	22
Colstrip East	2,094	1,870	87	0	104	0	0	32
Tongue River Road	4,234	3,680	118	347	59	15	11	3
Tongue River Road East	4,218	3,532	185	347	124	15	11	4
Moon Creek	4,026	3,177	277	117	452	0	0	3
Moon Creek East	4,047	3,065	344	117	516	0	0	5
Decker	2,826	2,237	332	0	132	0	0	125
Decker East	2,695	2,026	397	0	148	0	0	125

Notes:
[a] Totals may reflect a slight rounding error
[b] Includes parcels for which no ownership data was indicated in the Montana State Library, Montana Cadastral Framework
Source: Montana Department of Revenue 2014
BLM = Bureau of Land Management; USDA = U.S. Department of Agriculture; DNRC = Montana Department of Natural Resources Conservation; Montana FWP = Montana Fish, Wildlife & Parks

Table 12.2-2. Land Uses in the Right-of Way (acres)

Build Alternative	Forest Land[a]	Grazing Land	Irrigated Land: Flood Irrigation	Irrigated Land: Mechanical Irrigation	Unirrigated Hay Land	Summer Fallow Farmland
Tongue River	197	3,443	1	62	76	5
Tongue River East	221	3,477	0	41	60	5
Colstrip	274	1,670	26	38	50	0
Colstrip East	292	1,767	0	0	34	0
Tongue River Road	208	3,807	70	72	64	13
Tongue River Road East	232	3,805	69	51	48	13
Moon Creek	197	3,575	13	62	83	96
Moon Creek East	221	3,610	12	41	67	96
Decker	651	2,170	5	0	0	0
Decker East	679	2,011	5	0	0	0

Notes:
[a] Includes both forested land and noncommercial forested land designations
Source: Montana Department of Revenue 2013

Table 12.2-3. Private Property Impacts

Build Alternative	In the Right-of-Way			Severed Land	
	Private Properties	Residences / Other Structures	Water Wells	All Severed Land (acres)	Severed Farmland[a] (acres)
Tongue River	42	1 / 5	7	1,147	153
Tongue River East	32	1 / 19	5	2,719	7
Colstrip	36	1 / 5	9	147	136
Colstrip East	25	1 / 19	7	1,539	0
Tongue River Road	49	1 / 5	10	1,120	211
Tongue River Road East	39	1 / 19	8	1,559	75
Moon Creek	45	2 / 13	7	1,115	153
Moon Creek East	35	2 / 27	5	2,687	17
Decker	21	0 / 0	1	2,695	0
Decker East	20	0 / 0	1	3,390	0

Notes:
[a] Severed farmland includes areas of mechanically irrigated farmland that would be separated by the right-of-way from its source of irrigation
Sources: Montana Department of Revenue 2013, 2014; Montana Bureau of Mines and Geology 2013

Table 12.2-4. Special Farmland Designations in the Right-of-Way (acres)

Build Alternative	Prime Farmland if Irrigated	Farmland of Statewide Importance	Total
Tongue River	132	894	1,026
Tongue River East	173	889	1,062
Colstrip	91	389	480
Colstrip East	124	380	503
Tongue River Road	148	1,027	1,175
Tongue River Road East	174	1,015	1,189
Moon Creek	111	915	1,026
Moon Creek East	152	910	1,062
Decker	7	362	369
Decker East	0	381	381

Notes:
Sources: U.S. Department of Agriculture, Natural Resource Conservation Service 2013

Table 12.2-5. Conservation Easement Land and DNRC Leased Lands in the Right-of Way (acres)

Build Alternative	Conservation Easement Area	Area of DNRC Leases
Tongue River	422	84
Tongue River East	422	137
Colstrip	0	0
Colstrip East	0	53
Tongue River Road	2	57
Tongue River Road East	2	110
Moon Creek	422	206
Moon Creek East	422	259
Decker	0	86
Decker East	0	86

Notes:
Sources: Montana State Library 2013; Montana Department of Natural Resources and Conservation 2013

Table 12.2-6. Land Ownership Affected by Road Relocations to Outside the Right-of-Way (acres)

			Federal Land		State Land			
Build Alternative	Total[a]	Private	BLM	USDA	DNRC	Montana FWP	Miles City	No Data[b]
Tongue River	30.3	24.4	0.0	1.6	4.2	0.0	0.0	0.0
Tongue River East	20.6	14.8	0.0	1.6	4.2	0.0	0.0	0.0
Colstrip	38.8	36.9	0.0	0.0	1.8	0.0	0.0	0.0
Colstrip East	28.3	26.5	0.0	0.0	1.8	0.0	0.0	0.0
Tongue River Road	29.2	27.5	0.0	1.6	0.0	0.0	0.0	0.0
Tongue River Road East	19.5	17.9	0.0	1.6	0.0	0.0	0.0	0.0
Moon Creek	34.9	28.7	1.1	0.0	5.1	0.0	0.0	0.0
Moon Creek East	25.2	19.0	1.1	0.0	5.1	0.0	0.0	0.0
Decker	15.7	15.4	0.0	0.0	0.3	0.0	0.0	<0.1
Decker East	15.4	15.1	0.0	0.0	0.3	0.0	0.0	<0.1

Notes:
[a] Totals may reflect a slight rounding error
[b] Includes parcels for which no ownership data was indicated in the Montana State Library, Montana Cadastral Framework
Source: Montana Department of Revenue 2014
BLM = Bureau of Land Management; USDA = U.S. Department of Agriculture; DNRC = Montana Department of Natural Resources Conservation; Montana FWP = Montana Fish, Wildlife & Parks

Table 12.2-7. Land Uses in the Road Relocations Outside the Right-of-Way for Each Alternative (acres)

Build Alternative	Forest Land[a]	Grazing Land	Irrigated Land: Flood Irrigation	Irrigated Land: Mechanical Irrigation	Unirrigated Hay Land	Summer Fallow Farmland
Tongue River	0.0	26.5	0.9	1.9	0.7	0.0
Tongue River East	0.0	18.6	0.0	1.6	0.4	0.0
Colstrip	0.0	35.6	0.9	0.3	0.8	0.0
Colstrip East	0.0	27.7	0.0	0.0	0.5	0.0
Tongue River Road	0.0	26.1	1.4	0.8	0.7	0.0
Tongue River Road East	0.0	18.2	0.5	0.4	0.4	0.0
Moon Creek	0.0	30.6	0.9	1.9	0.7	0.4
Moon Creek East	0.0	22.7	0.0	1.6	0.4	0.4
Decker	0.6	15.1	0.0	0.0	0.0	0.0
Decker East	0.6	14.8	0.0	0.0	0.0	0.0

Notes:
[a] Includes both forested land and noncommercial forested land designations
Source: Montana Department of Revenue 2013

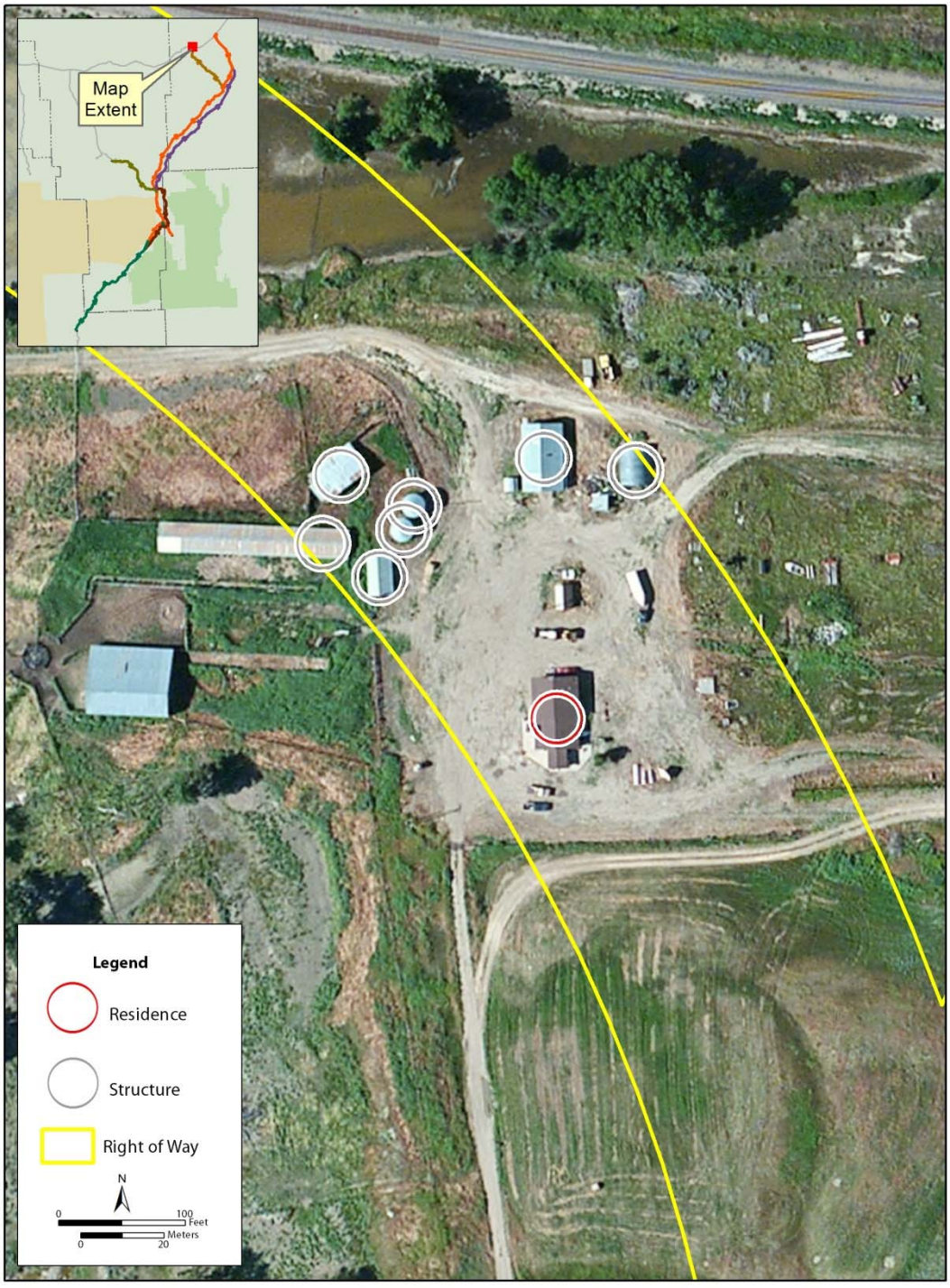

Figure 12.2-5. Residences and Structures within the Right of Way for the Moon Creek and Moon Creek East Alternatives

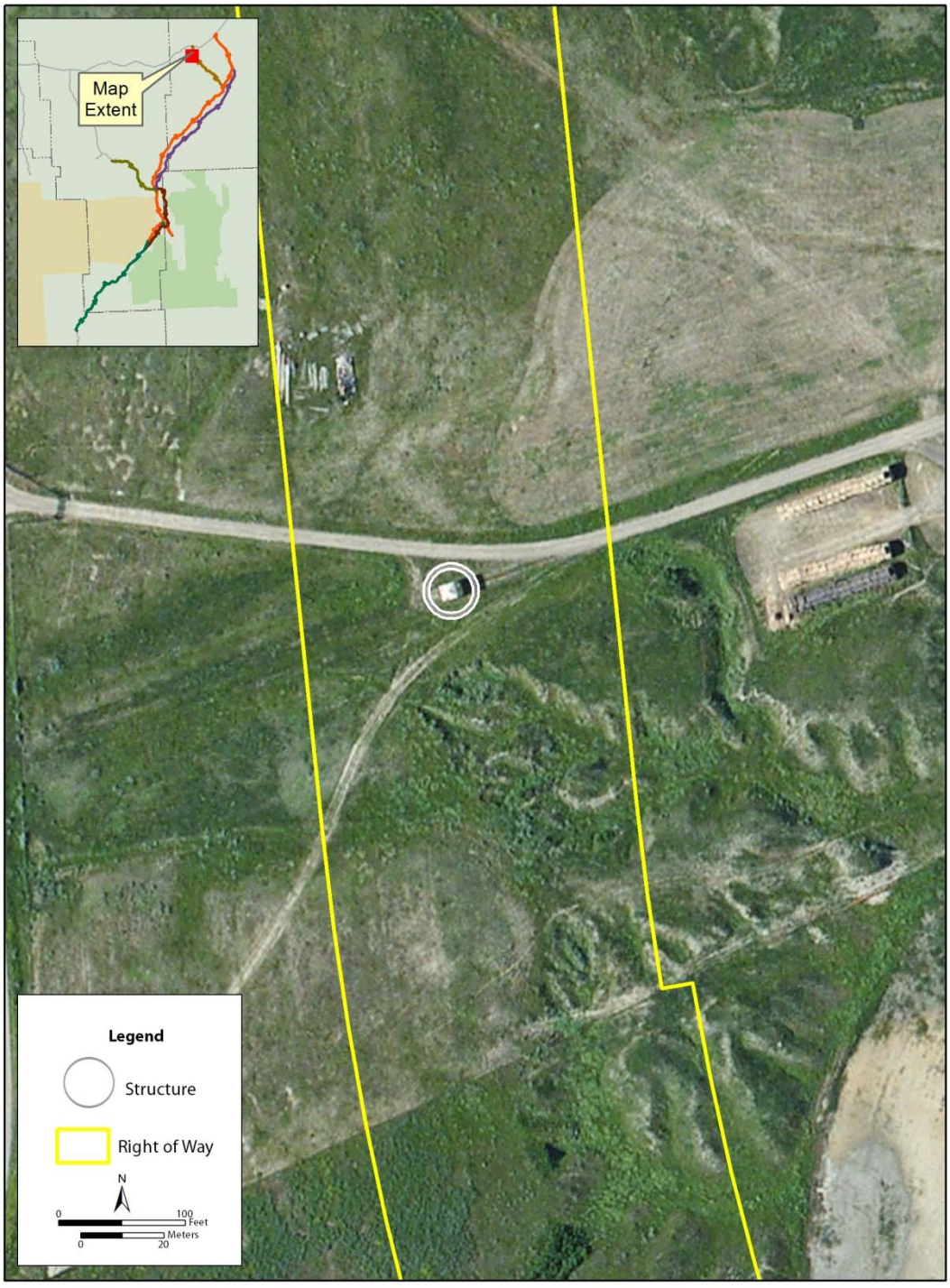

Figure 12.2-6 Residences and Structures within the Right of Way for the Moon Creek and Moon Creek East Alternative

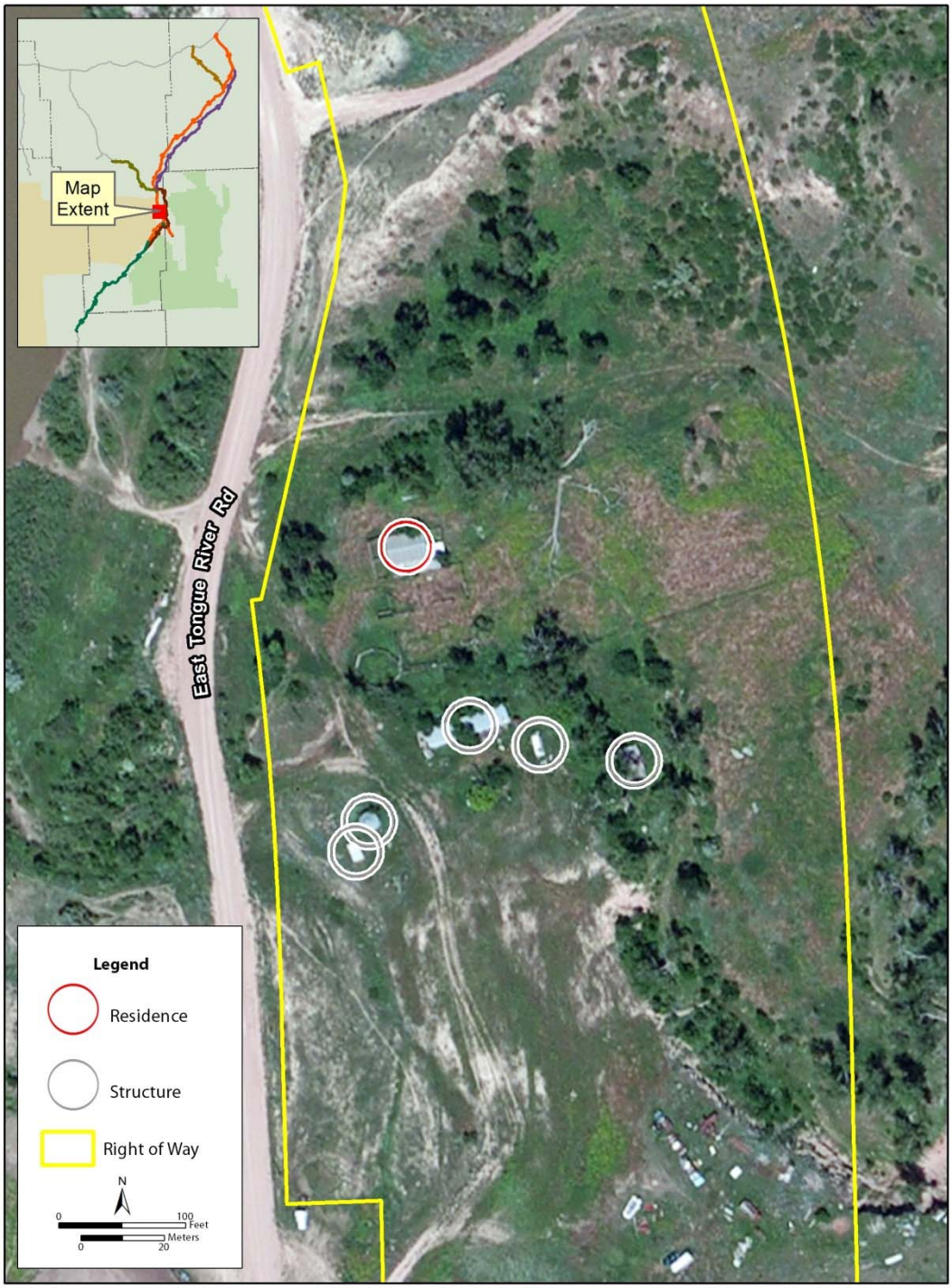

Figure 12.2-7 Residences and Structures within the Right of Way for the Tongue River, Colstrip, Tongue River Road, and Moon Creek Alternatives

Figure 12.2-8 Residences and Structures within the Right of Way for the Tongue River East, Colstrip East, Tongue River Road East, and Moon Creek East Alternatives

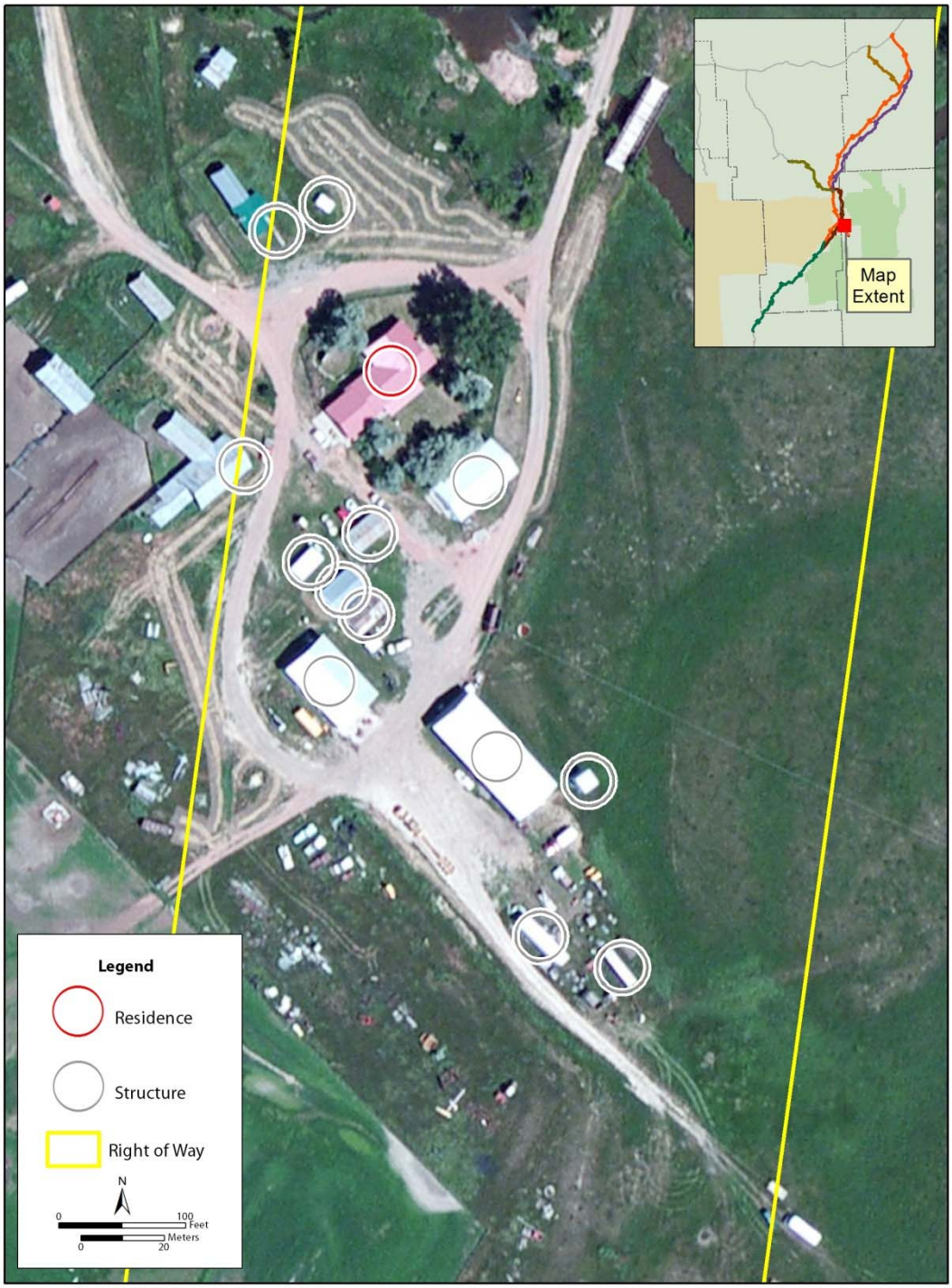

Figure 12.2-9 Residences and Structures within the Right of Way for the Tongue River East, Colstrip East, Tongue River Road East, and Moon Creek East Alternatives

Tongue River Alternatives

Tongue River Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Tongue River Alternative would directly affect land ownership of 3,783 acres within the right-of-way. This would include 2,969 acres of private land, 129 acres of BLM land, 347 acres of Fort Keogh land, 306 acres of DNRC land, 15 acres of the Miles City Fish Hatchery (Montana FWP), and 11 acres of land owned by the City of Miles City, Montana (Table 12.2-1).

Construction and operation of the Tongue River Alternative would affect current land uses in the right-of-way. In total, 3,443 acres of the right-of-way are presently grazing land, and 62 acres are mechanically irrigated land (Table 12.2-2). Approximately 132 acres of prime farmland[3] and 894 acres of farmland of statewide importance would be affected by construction of the Tongue River Alternative (Table 12.2-4).

Approximately 30.3 acres of land outside the right-of-way would be affected by road relocations associated with the Tongue River Alternative, including private, USDA, and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

Construction and operation of the Tongue River Alternative would cross through 422 acres of conservation easements and 84 acres of DNRC leases within the right-of-way (Table 12.2-5). Road relocations outside the right-of-way would affect 0.7 acre of conservation easement land and 3.3 acres of DNRC leases. Impacts on notable land uses would also result, as follows.

Miles City Fish Hatchery

Construction and operation of the Tongue River Alternative would affect 15 acres at the Miles City Fish Hatchery for the right-of-way. This area would not include any buildings, fishponds, or other aboveground facilities at the property.

Spotted Eagle Lake

Construction and operation of the Tongue River Alternative would affect 11 acres along the western periphery of the Spotted Eagle Recreation Area (Figure 12.4-1). The majority of the recreational facilities and uses are concentrated in the lake and to the north and east of the lake. However, some existing trails would be displaced by the right-of-way.

[3] This value includes prime farmland that is presently in agricultural production and prime farmland that is not in production. This applies to all build alternatives.

Fort Keogh

Construction and operation of the Tongue River Alternative would affect 347 acres of Fort Keogh (Table 12.2-1) within the right-of-way and would cross actively managed pastures near the eastern edge of the property. This build alternative would reduce the amount of land available for grazing in these pastures and would act as a barrier to movement across Fort Keogh, most notably restricting movement of personnel, cattle, feed, and equipment between the pastures adjacent to Tongue River and the remainder of Fort Keogh. As part of their preliminary project design, TRRC plans to construct three at-grade road crossings to allow for continued movement across the right-of-way within Fort Keogh at certain points. However, unfettered movement within the property would be lost. Construction of this build alternative would also alter the environment along the eastern boundary of Fort Keogh. Because the uniquely undeveloped conditions at the facility allow for large-scale research that cannot be done elsewhere (Petersen pers. comm.), this build alternative may affect the ongoing ability of Fort Keogh to function as a research laboratory in the manner in which it is presently operating. Approximately 1.6 acres outside the right-of-way would be affected by road relocations in Fort Keogh.

Tongue River Ranch

The Tongue River Alternative would cross the Tongue River Ranch on its southeastern border. All 229 acres of ranch land in the right-of way would be removed from its present use. Although the right-of-way would create a linear barrier that bisects the ranch, as part of its preliminary design, TRRC would install five at-grade road crossings to allow for movement across the right-of-way (Figure 12.2-4). Approximately 1 acre of land in Tongue River Ranch would be affected by the road relocations outside the right-of-way.

Bice and Hirsh Conservation Easements

The Tongue River Alternative would cross two conservation easements: the Bice Ranch Conservation Easement and the Hirsch Ranch Conservation Easement. Approximately 422 acres of conservation easement land would be acquired for the right-of-way (Table 12.2-5). The Tongue River Alternative could also affect public use of the conservation easements by limiting or restricting passage. Effects on the recreational use of the conservation easements, including access to and movement within these conservation easements, are described in Section 12.3, *Recreation.* Approximately 0.7 acre of the conservation easement land would be affected by the road relocations outside the Tongue River Alternative right-of-way.

Displacement of Capital Improvements

Construction of the Tongue River Alternative would affect 42 privately owned properties, displacing one residence, five other structures, and seven water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Tongue River Alternative would result in the severance of 1,147 acres of land, including 153 acres of mechanically irrigated farmland, which would be rendered unsuitable for its current use (Table 12.2-3).

Tongue River East Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Tongue River East Alternative would directly affect land ownership of 3,803 acres within the right-of-way. This would include 2,856 acres of private land, 196 acres of BLM land, 347 acres of Fort Keogh land, 371 acres of DNRC land, 15 acres of the Miles City Fish Hatchery (Montana FWP), and 11 acres of land owned by the City of Miles City (Table 12.2-1).

Construction and operation of the Tongue River East Alternative would affect current land uses in the right-of-way. In total, 3,477 acres of the right-of-way are presently grazing land, and 41 acres are mechanically irrigated land (Table 12.2-2). Approximately 173 acres of prime farmland and 889 acres of farmland of statewide importance would be affected by the right-of-way (Table 12.2-4).

Approximately 20.6 acres of land outside the right-of-way would be affected by road relocations associated with the Tongue River East Alternative, including private, USDA, and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

Construction and operation of the Tongue River East Alternative would affect 422 acres of conservation easements and 137 acres of DNRC leases (Table 12.2-5) within the right-of-way. Road relocations outside the right-of-way would affect 0.7 acre of conservation easement land and 3.3 acres of DNRC leases. Because notable land uses along the Tongue River East Alternative are located toward its northern end where it would overlap the Tongue River Alternative, the Tongue River East Alternative would cross through the same notable land uses and affect them as described above for the Tongue River Alternative.

Displacement of Capital Improvements

Construction and operation of the Tongue River East Alternative would affect 32 privately owned properties, displacing one residence, 19 other structures, and five water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Tongue River East Alternative would result in the severance of 2,719 acres of land, including 7 acres of mechanically irrigated farmland, which would be rendered unsuitable for its current use (Table 12.2-3).

Colstrip Alternatives

Colstrip Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Colstrip Alternative would directly affect land ownership of 2,040 acres within the right-of-way. This would include 1,949 acres of private land, 28 acres of BLM land, and 40 acres of DNRC land (Table 12.2-1).

Construction of the Colstrip Alternative would affect current land uses in the right-of-way. In total, 1,670 acres of the right-of-way are presently grazing land, and 38 acres are mechanically irrigated land (Table 12.2-2). Approximately 91 acres of prime farmland and 389 acres of farmland of statewide importance would be affected by the right-of-way (Table 12.2-4).

Approximately 38.8 acres of land outside the right-of-way would be affected by road relocations associated with the Colstrip Alternative, including private and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Colstrip Alternative would not cross through any conservation easement lands, areas of DNRC leases, or other lands of notable uses.

Displacement of Capital Improvements

Construction and operation of the Colstrip Alternative would affect 36 privately owned properties, displacing one residence, five other structures, and nine water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Colstrip Alternative would result in the severance of 147 acres of land, including 136 acres of mechanically irrigated farmland, which would be rendered unsuitable for its current use (Table 12.2-3).

Colstrip East Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Colstrip East Alternative would directly affect land ownership of 2,094 acres within the right-of-way. This would include 1,870 acres of private land, 87 acres of BLM land, and 104 acres of DNRC land (Table 12.2-1).

Construction and operation of the Colstrip East Alternative would affect current land uses in the right-of-way. In total, 1,767 acres of the right-of-way are presently grazing land, and there is no mechanically irrigated land (Table 12.2-2). Approximately 124 acres of prime farmland and 380 acres of farmland of statewide importance would be affected by the right-of-way (Table 12.2-4).

Approximately 28.3 acres of land outside the right-of-way would be affected by road relocations associated with the Colstrip East Alternative, including private and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Colstrip East Alternative would not cross through any conservation easement lands, but the right-of-way would cross through 53 acres of DNRC lease land. The Colstrip East Alternative would not cross through other lands of notable uses.

Displacement of Capital Improvements

Construction and operation of the Colstrip East Alternative would affect 25 privately owned properties, displacing one residence, 19 other structures, and seven water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Colstrip East Alternative would result in the severance of 1,539 acres of land, but no mechanically irrigated farmland would be severed (Table 12.2-3).

Tongue River Road Alternatives

Tongue River Road Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Tongue River Road Alternative would directly affect land ownership of 4,234 acres within the right-of-way. This would include 3,680 acres of private land, 118 acres of BLM land, 347 acres of Fort Keogh land, 59 acres of DNRC land, 15 acres of the Miles City Fish Hatchery (Montana FWP), and 11 acres of land owned by the City of Miles City, Montana (Table 12.2-1).

Construction and operation of the Tongue River Road Alternative would affect current land uses in the right-of-way. In total, 3,807 acres of the right-of-way are presently grazing land, and 72 acres are mechanically irrigated land (Table 12.2-2). Approximately 148 acres of prime farmland and 1,027 acres of farmland of statewide importance would be required for the right-of-way (Table 12.2-4).

Approximately 29.2 acres of land outside the right-of-way would be affected by road relocations associated with the Tongue River Road Alternative, including private and USDA land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Tongue River Road Alternative right-of-way would cross through 2 acres of conservation easement and 57 acres of DNRC lease land (Table 12.2-5). Road relocations outside the right-of-way would affect 1.2 acres of conservation easement land. This build alternative would cross through the Miles City Fish Hatchery, Fort Keogh, and the Hirsch Ranch Conservation Easement and affect them as described previously for the Tongue River Alternative, but it would avoid the Tongue River Ranch and the Bice Ranch Conservation Easements. The Tongue River Road Alternative right-of-way would affect 53 acres of the Pumpkin Creek Ranch and Recreation Area.

Displacement of Capital Improvements

Construction and operation of the Tongue River Road Alternative would affect 49 privately owned properties, displacing one residence, five other structures, and 10 water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Tongue River Road Alternative would result in the severance of 1,120 acres of land, including 211 acres of mechanically irrigated farmland, which would be rendered unsuitable for its current use (Table 12.2-3).

Tongue River Road East Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Tongue River Road East Alternative would directly affect land ownership of 4,218 acres within the right-of-way. This would include 3,532 acres of private land, 185 acres of BLM land, 347 acres of Fort Keogh land, 124 acres of DNRC land, 15 acres of the Miles City Fish Hatchery (Montana FWP), and 11 acres of land owned by the City of Miles City, Montana (Table 12.2-1).

Construction and operation of the Tongue River Road East Alternative would affect current land uses in the right-of-way. In total, 3,805 acres of the right-of-way are presently grazing land, and 51 acres are mechanically irrigated land (Table 12.2-2). Approximately 174 acres

of prime farmland and 1,015 acres of farmland of statewide importance would be required for the right-of-way (Table 12.2-4).

Approximately 19.5 acres of land outside the right-of-way would be affected by road relocations associated with the Tongue River Road East Alternative, including private and USDA land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Tongue River Road East Alternative right-of-way would cross through 2 acres of conservation easement lands and 110 acres of DNRC lease lands (Table 12.2-5). Road relocations outside the right-of-way would affect 1.2 acres of conservation easement land. The Tongue River Road East Alternative would cross through the same lands of notable uses and affect them as described above for the Tongue River Road Alternative.

Displacement of Capital Improvements

Construction and operation of the Tongue River Road East Alternative would affect 39 privately owned properties, displacing one residence, 19 other structures, and eight water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Tongue River Road East Alternative would result in the severance of 1,559 acres of land, including 75 acres of mechanically irrigated farmland, which would be rendered unsuitable for its current use (Table 12.2-3).

Moon Creek Alternatives

Moon Creek Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Moon Creek Alternative would directly affect land ownership of 4,026 acres within the right-of-way. This would include 3,177 acres of private land, 277 acres of BLM land, 117 acres of Fort Keogh land, and 452 acres of DNRC land (Table 12.2-1).

Construction and operation of the Moon Creek Alternative would affect current land uses in the right-of-way. In total, 3,575 acres of the right-of-way are presently grazing land, and 62 acres are mechanically irrigated land (Table 12.2-2). Approximately 111 acres of prime farmland and 915 acres of farmland of statewide importance would be required for the right-of-way (Table 12.2-4).

Approximately 34.9 acres of land outside the right-of-way would be affected by road relocations associated with the Moon Creek Alternative, including private, BLM, and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Moon Creek Alternative right-of-way would cross through 422 acres of conservation easement lands and 206 acres of DNRC lease land (Table 12.2-5). Road relocations outside the right-of-way would affect 0.7 acre of conservation easement land and 4.1 acres of DNRC lease lands. The Moon Creek Alternative would also affect the Tongue River Ranch and the Bice Ranch and Hirsch Ranch Conservation Easements as described for the Tongue River Alternative.

Fort Keogh

Construction and operation of the Moon Creek Alternative would affect 117 acres in Fort Keogh in the right-of-way. The right-of-way would cross through two pastures used primarily for livestock breeding and research projects (Petersen pers. comm.). As part of its preliminary design plans, TRRC would construct two at-grade road crossings, which would allow for continued movement across the right-of-way.

Displacement of Capital Improvements

Construction and operation of the Moon Creek Alternative would affect 45 privately owned properties, displacing two residences, 13 other structures, and seven water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Moon Creek Alternative would result in the severance of 1,115 acres of land, including 153 acres of mechanically irrigated farmland, which would be rendered unsuitable for its current use (Table 12.2-3).

Moon Creek East Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Moon Creek East Alternative would directly affect land ownership of 4,047 acres within the right-of-way. This would include 3,065 acres of private land, 344 acres of BLM land, 117 acres of Fort Keogh land, and 516 acres of DNRC land (Table 12.2-1).

Construction and operation of the Moon Creek East Alternative would affect current land uses in the right-of-way. In total, 3,610 acres of the right-of-way are presently grazing land, and 41 acres are mechanically irrigated land (Table 12.2-2). Approximately 152 acres of

prime farmland and 910 acres of farmland of statewide importance would be required for the right-of-way (Table 12.2-4).

Approximately 25.2 acres of land outside the right-of-way would be affected by road relocations associated with the Moon Creek East Alternative, including private, BLM, and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Moon Creek East Alternative right-of-way would cross through 422 acres of conservation easements and 259 acres of DNRC lease land (Table 12.2-5). Road relocations outside the right-of-way would affect 0.7 acre of conservation easement land and 4.1 acres of DNRC lease lands. The Moon Creek East Alternative would affect Fort Keogh, Tongue River Ranch, and the Bice Ranch and Hirsch Ranch Conservation Easements, as described above for the Moon Creek Alternative.

Displacement of Capital Improvements

Construction and operation of the Moon Creek East Alternative would affect 35 privately owned properties, displacing two residences, 27 other structures, and five water wells documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Moon Creek East Alternative would result in the severance of 2,687 acres of land, including 17 acres of mechanically irrigated farmland, which would be rendered unsuitable for its current use (Table 12.2-3).

Decker Alternatives

Decker Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Decker Alternative would directly affect land ownership of 2,826 acres within the right-of-way. This would include 2,237 acres of private land, 332 acres of BLM land, and 132 acres of DNRC land (Table 12.2-1).

Construction and operation of the Decker Alternative would affect current land uses in the right-of-way. In total, 2,170 acres of the right-of-way are presently grazing land, and there is no mechanically irrigated land (Table 12.2-2). Approximately 7 acres of prime farmland and 362 acres of farmland of statewide importance would be required for the right-of-way (Table 12.2-4).

Approximately 15.7 acres of land outside the right-of-way would be affected by road relocations associated with the Decker Alternative, including private and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Decker Alternative right-of-way would not cross any conservation easements but would cross 86 acres of DNRC lease land (Table 12.2-5). Road relocations outside the right-of-way would affect 0.3 acre of DNRC lease lands. The Decker Alternative would not cross any other lands of notable uses.

Displacement of Capital Improvements

Construction and operation of the Decker Alternative would affect 21 privately owned properties and one water well, but it would not displace residences or other structures documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Decker Alternative would result in the severance of 2,695 acres of land. No mechanically irrigated farmland would be severed (Table 12.2-3).

Decker East Alternative

Acquisition of Land and Conversion of Land Uses

Construction and operation of the Decker East Alternative would directly affect land ownership of 2,695 acres within the right-of-way. This would include 2,026 acres of private land, 397 acres of BLM land, and 148 acres of DNRC lease lands (Table 12.2-1).

Construction and operation of the Decker East Alternative would affect current land uses in the right-of-way. In total, 2,011 acres of the right-of-way are presently grazing land and there is no mechanically irrigated land (Table 12.2-2). No prime farmland and 381 acres of farmland of statewide importance would be required for the right-of-way (Table 12.2-4).

Approximately 15.4 acres of land outside the right-of-way would be affected by road relocations associated with the Decker East Alternative, including private and DNRC land (Table 12.2-6). The majority of this land is presently used for grazing (Table 12.2-7).

Notable Land Uses

The Decker East Alternative right-of-way would not cross any conservation easements but would cross 86 acres of DNRC lease lands (Table 12.2-5). Road relocations outside the right-of-way would affect 0.3 acre of DNRC lease lands. The Decker East Alternative would not cross any other lands of notable uses.

Displacement of Capital Improvements

Construction and operation of the Decker East Alternative would affect 20 privately owned properties and one water well, but it would not displace residences or other structures documented in the right-of-way (Table 12.2-3).

Severance of Contiguous Properties

Construction and operation of the Decker East Alternative would result in the severance of 3,390 acres of land. No mechanically irrigated farmland would be severed (Table 12.2-3).

12.2.4.3 No-Action Alternative

Under the No-Action Alternative, TRRC would not construct and operate the proposed Tongue River Railroad, and there would be no impacts on land use from construction or operation of the proposed rail line.

12.2.4.4 Mitigation and Unavoidable Environmental Consequences

To avoid or minimize the environmental impacts on land use from the proposed rail line, OEA is recommending that the Board impose 12 mitigation measures, including four volunteered by TRRC (Chapter 19, Section 19.2.9, *Land Resources*). These measures would require TRRC to negotiate compensation for land converted in the right-of-way, install cattle underpasses, replace capital improvements displaced by the rail line, consult with landowners to limit loss of access during rail construction, coordinate with landowners while negotiating easements and access points, adhere to mitigation required for an easement to cross the Miles City Fish Hatchery (Tongue River Alternatives or Tongue River Road Alternatives), adhere to requirements for easements across the Fort Keogh Livestock and Range Research Laboratory property line, comply with county weed control plans, negotiate with landowners for land acquisition, work with landowners to redress damage, avoid obstructing business entrances and exits, and consult with utility owners to determine affected utilities.

Even with the implementation of OEA's recommended mitigation measures and TRRC's voluntary measures, the proposed rail line would cause unavoidable impacts on land use. These impacts would include acquisition of land within the right-of-way from existing landowners and conversion of land within the right-of-way to rail line use. Any build alternative would affect grazing, both on private and public lands. Any build alternative would require the acquisition and conversion of federal, state, and private land within the right-of-way. The Tongue River Alternatives or the Tongue River Road Alternatives would require the acquisition and conversion of property owned by the City of Miles City. Any build alternative would affect private properties through the direct loss of land in the right-of-way. Depending on the build alternative, between 20 and 49 private properties would be affected. OEA concludes that these adverse impacts would vary from moderate to high. OEA concludes that the adverse impacts of right-of-way acquisition and subsequent removal

of private properties, residences, or structures would be high. OEA concludes the adverse impacts on owners of conservation easements would be moderate. OEA concludes that the adverse impacts of the severance of contiguous properties would be moderate.

12.3 Recreation

This section describes the impacts on recreational resources that would result from construction and operation of each of the build alternatives under consideration. The subsections that follow describe the recreation study area, methods used to analyze impacts, affected environment, and the impacts of the build alternatives on recreation. The regulations and guidance related to recreation are summarized in Section 12.6, *Applicable Regulations*. The contribution of the proposed rail line to cumulative impacts on recreation is discussed in Chapter 18, *Cumulative Impacts*.

In summary, construction and operation of the proposed rail line would result in impacts on recreational resources by introducing visual and noise disturbances. Additionally, the acquisition and conversion of recreational land to right-of-way could limit access to recreational land on either side of the right-of-way. The Tongue River Alternatives and Tongue River Road Alternatives would affect the most recreational resources, while the Colstrip Alternatives would affect the fewest. The Tongue River Alternatives and Tongue River Road Alternatives would affect the most recreational resources by introducing noise and visual disturbances. The Tongue River Alternatives and Moon Creek Alternatives would convert the most acreage of conservation easements to right-of-way use, while the Colstrip Alternatives and Decker Alternatives would convert the least. The Tongue River East Alternative would result in the acquisition and conversion of the most block management area (BMA) acreage (Section 12.3.3.2, *State Recreation Areas and Facilities, Block Management Areas*), while the Decker Alternatives would result in the least. The Tongue River Alternatives and Moon Creek Alternatives would result in acquisition and conversion of the most acres of the Tongue River Ranch. No other build alternatives would acquire and convert land in the Tongue River Ranch. The Tongue River Road Alternatives are the only build alternatives that would result in the acquisition and conversion of any part of the Pumpkin Creek Ranch and Recreation Area. The Decker Alternatives would not pass through any identified recreational areas and would not convert any recreational land to right-of-way use. OEA concludes that the adverse impact would range from minor to moderate.

12.3.1 Study Area

OEA defined the study area for recreation as all recreational resources in the rights-of-way for any build alternative and any recreational resources for which access would be limited or lost or that could be affected by noise and visual disturbances from construction and operation of the proposed rail line. These resources include national, state, local, and private designated recreational areas used for hunting, fishing, floating and paddling, hiking, wildlife viewing, horseback riding, and a variety of other activities.

The primary recreational resources in the study area are the Tongue River, Spotted Eagle Recreation Area, Twelve Mile Dam Fishing Access Site, Pumpkin Creek Recreation Area, Custer National Forest, Tongue River Reservoir State Park, the multiple areas administered through Montana Fish, Wildlife & Parks (Montana FWP) conservation easements and its BMA program, and other legally accessible BLM lands not designated as incompatible with recreational use. Recreational opportunities also exist on private land in the study area.

12.3.2 Analysis Methods

OEA used the following methods and information to evaluate the impacts of construction and operation of the alternatives under consideration on recreational resources.

- OEA reviewed recreation data available from the Bureau of Land Management (BLM), U.S. Department of Agriculture (USDA), Montana Department of Natural Resources and Conservation (DNRC), Montana FWP, and the City of Miles City.
- OEA reviewed plans and documents to identify site-specific recreational activities, the nature of dispersed-use recreational activities (such as hunting and fishing), and surface land use designations compatible with recreational use.
- OEA reviewed maps of the build alternatives in coordination with publically available maps of recreational management areas to identify affected areas and key recreation access points and paths.
- OEA incorporated geographic information system (GIS) analysis to visualize, analyze, and interpret spatial data sources for recreational activities and areas.
- OEA consulted with federal, state, and local agencies about recreational areas and activities under their respective jurisdiction or management.

12.3.3 Affected Environment

This section describes the existing environmental conditions related to recreation in the study area.

12.3.3.1 Federal Recreation Areas

Custer National Forest

Managed by the U.S. Forest Service, Custer National Forest consists of nearly 1.3 million acres and comprises three districts in two states: the Beartooth Ranger District in western Montana, the Sioux Ranger District in northwestern South Dakota, and the Ashland Ranger District in Ashland, Montana. The Ashland Ranger District is the largest continuous block of federally owned land in eastern Montana. Recreational activities include hunting, fishing, hiking, picnicking, bicycling, renting cabins, camping, caving, climbing, horseback riding,

nature viewing, off-highway vehicle riding, scenic driving, and winter sports (U.S. Forest Service 2014a).

The Cook Mountain, King Mountain, and Tongue River Breaks Hiking and Riding Areas are on the western side of the forest closest to the proposed rail line (Figures 12.3-1 and 12.3-2). These areas provide nearly 40,000 acres for hunting, riding, hiking, and nature study. These areas also provide four campgrounds and 22 picnic sites (U.S. Forest Service 2014b). Custer National Forest can be accessed via Highway 212, Fifteen Mile Road, Ten Mile Road, Drop Tube Road, Beaver Creek Road, Otter Creek Road, O'Dell Creek Road, Poker Teechee Road, Lee Creek Road, Hanging Woman Creek Road, and Tooley Creek Road.

Bureau of Land Management

BLM-administered lands in the study area include the Pumpkin Creek Ranch and Recreation Area and the Zook Creek Wilderness Study Area. The Lewis and Clark Trail Special Recreation Management Area—which is in BLM's National Conservation Land System—is also in the study area. Other BLM-administered lands, when not designated as incompatible with recreation, provide the public with opportunities for casual use (activities that do not cause any appreciable disturbance or damage to public lands). Other permitted activities are described in Section 12.2.3.5, *Land Use Programs*.

Pumpkin Creek Ranch and Recreation Area

The Pumpkin Creek Ranch and Recreation Area is a 20,578-acre recreational area administered by BLM and located approximately 15 miles south of Miles City (Figure 12.3-1) (Bureau of Land Management 2011). The Pumpkin Creek Ranch and Recreation Area can be accessed from Tongue River Road from the northwest and Highway 59 from the north and east. There are currently no amenities at the site, and recreational activities consist mainly of hunting, hiking, mountain biking, wildlife viewing, sledding, snowmobiling, and horseback riding (Bureau of Land Management 2005).

Zook Creek Wilderness Study Area

In 1993, BLM determined that the 8,438-acre tract of land 22 miles south of Ashland called Zook Creek could be designated a wilderness study area (WSA), as defined in Section 603(c) of the Federal Land Policy and Management Act of 1976. This act directed BLM to inventory landholdings to determine which lands would be suitable (i.e., contain adequate "wilderness characteristics") for designation as a WSA.[1] Areas identified as having wilderness characteristics are classified as WSAs and managed to maintain wilderness characteristics. The WSA status may precede Congress's determination to include the area in

[1] Wilderness characteristics are described as land that "generally appears to have been affected primarily by the forces of nature, to have outstanding opportunities for solitude and primitive, unconfined recreation, and have at least 5,000 acres of roadless land or is of sufficient size as to make it practicable for preservation and use in an unimpaired condition." Additionally, lands must contain "ecological, geological, or other features of scientific, educational, scenic or historic value" (Bureau of Land Management 2012).

the National Wilderness Preservation System as a wilderness area. As a WSA, Zook Creek offers recreational activities, including hiking, picnicking, and nature viewing. No public roads provide direct access to this area.

Lewis and Clark Trail Special Recreation Management Area

The Lewis and Clark Trail Special Recreation Management Area is a corridor that follows a portion of the Yellowstone and Missouri Rivers, including where the Yellowstone River passes north of the study area (Figure 12.3-1). Although the area includes the Lewis and Clark National Historic Trail, a developed recreation site, and dispersed use along the shoreline of both rivers, none of these specific features is in the study area for recreation. However, the full corridor includes privately owned land in the recreation study area near the northernmost point of the Moon Creek Alternatives.

Fort Keogh Livestock and Range Research Laboratory

The USDA-operated Fort Keogh Livestock and Range Research Laboratory (Fort Keogh) is an approximately 55,000-acre rangeland beef cattle research facility with a mission to "research and develop ecologically and economically sustainable range animal management systems to meet consumer needs" (U.S. Department of Agriculture 2014). Although Fort Keogh itself is not an officially designated recreational area, it has participated in the Montana FWP-administered BMA program for over 20 years. Fort Keogh allows hunting in two areas of the property: archery hunting between the Yellowstone River and Interstate 94 (I-94), and general hunting north of the Yellowstone River and south of I-94 (Montana Fish, Wildlife & Parks 2012). Fort Keogh also has a recreational access program for runners, hikers, fishers, dog walkers, and others (Petersen pers. comm.).

Wolf Mountain Battlefield National Historic Landmark

The U.S. National Park Service designated the Wolf Mountain Battlefield a National Historic Landmark in 2008 to commemorate a battle between the Lakota Sioux and Northern Cheyenne and the U.S. Army in 1877. The battlefield is located approximately 4 miles south of Birney, Montana, on privately owned land (Figure 12.3-2). The site of the historic battlefield itself is not publicly accessible; however, a monument and plaque are located near the battlefield along Tongue River Road.

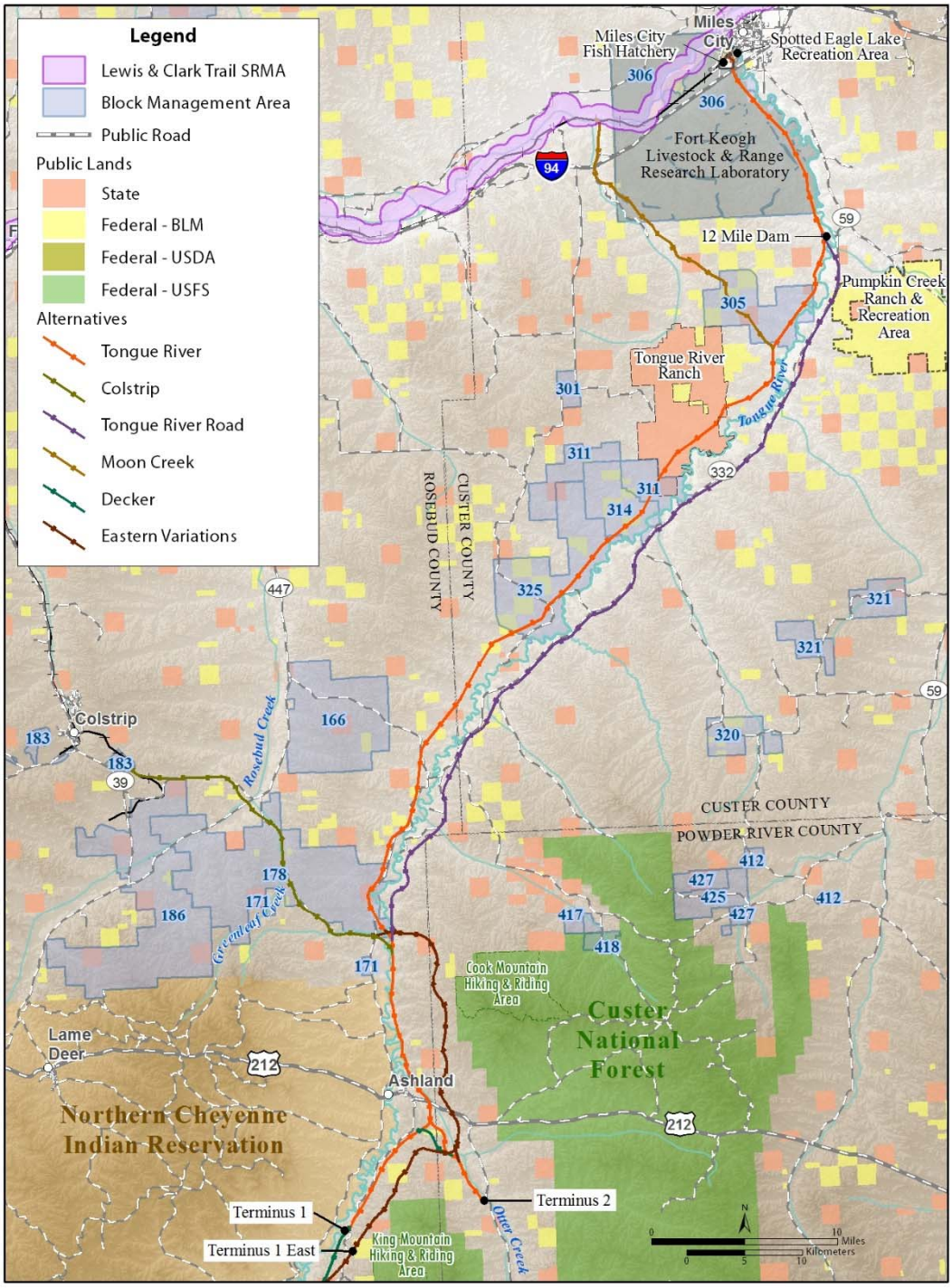

Figure 12.3-1. Recreational Resources, Northern Alternatives

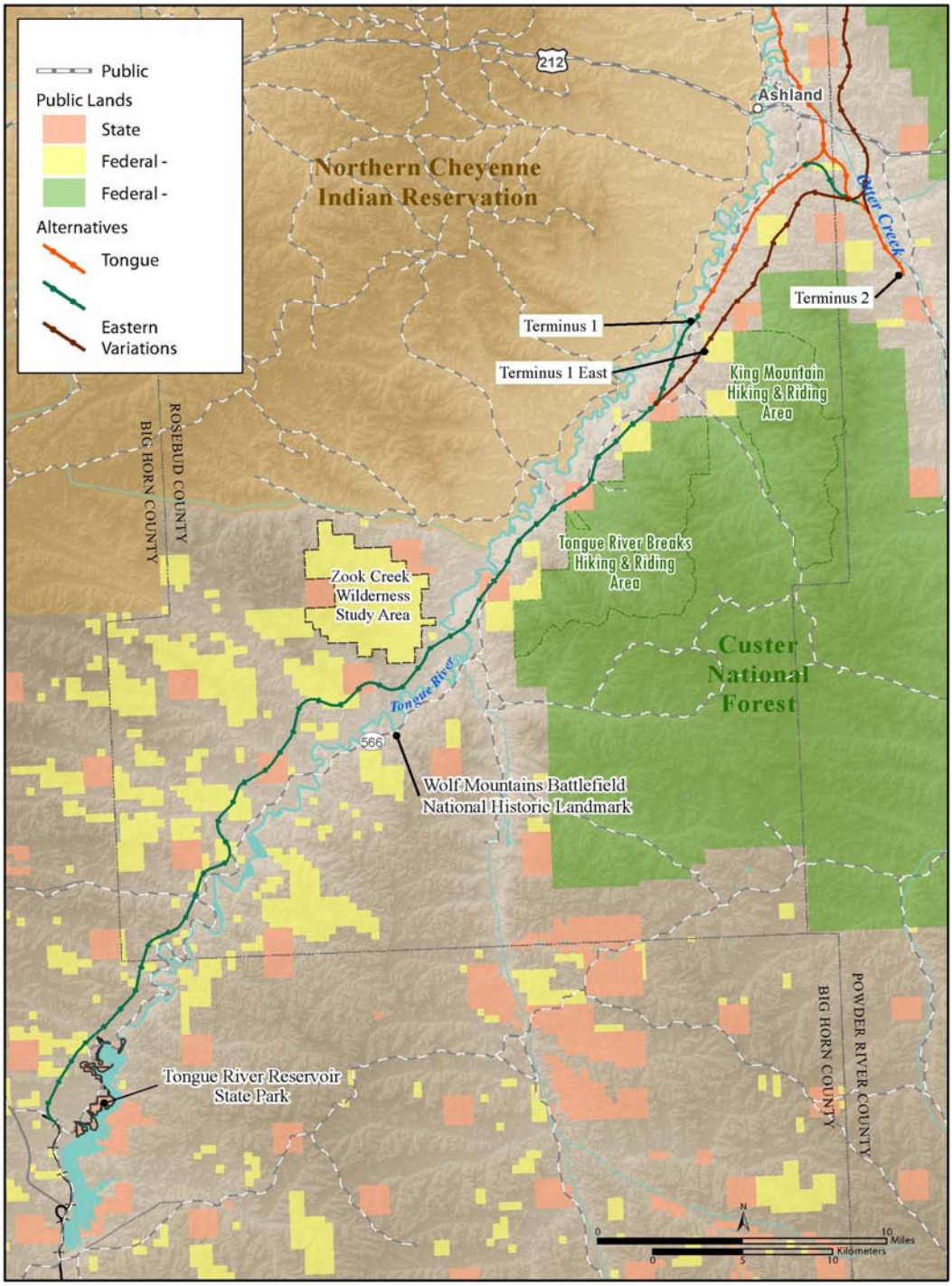

Figure 12.3-2. Recreational Resources, Southern Alternatives

12.3.3.2 State Recreation Areas and Facilities

Montana Fish Wildlife, & Parks

Twelve Mile Dam Fishing Access Site

Twelve Mile Dam Fishing Access Site is a 35-acre site administered by Montana FWP, located approximately 12 miles south of Miles City (Figure 12.3-1). On-site activities include fishing, camping, and waterfowl hunting during upland game bird season. Camping, fishing, and boating are also offered (Montana Fish, Wildlife & Parks 2013a). Boaters and floaters can launch from the fishing access site and travel downstream to Miles City. The fishing access site is accessible by Highway 59, 1 mile southwest of the Tongue River Road (Montana Fish, Wildlife & Parks 2013a). Approximately 4,620 vehicles visited the site in 2013 (Muscha pers. comm.).

Block Management Areas

The BMA program is a cooperative program between Montana FWP, private landowners, and public land-management agencies developed as a means of providing hunting opportunities to the public (Montana Fish, Wildlife & Parks 2008). Montana FWP administers the BMA program, which provides free hunting access to private lands and isolated public lands. Landowner participation in this program is voluntary, with contracts negotiated on an annual basis. Seven properties in the study area participated in the BMA program in 2013 (Montana Fish, Wildlife & Parks 2013b). The BMA properties are described below and depicted in Figures 12.3-3 and 12.3-4. All seven of these BMAs are Management Type II, meaning hunters must receive permission from the landowner before accessing the BMA.

- **BMA 178 Rocker Six Cattle Company.** BMA 178 consists of 32,536 acres located south of Colstrip on Greenleaf Road. This property has 683 average annual hunter days,[2] and game species include mule deer, whitetail deer, antelope, upland birds, and turkey.
- **BMA 186 Greenleaf Land and Livestock.** BMA 186 consists of 31,400 acres located between Greenleaf Road and the Northern Cheyenne Indian Reservation. The property has 47 average annual hunter days, and game species include mule deer, whitetail deer, antelope, upland birds, and turkey.
- **BMA 305 Mark Fix Property.** BMA 305 is located 16 miles south of Miles City on Tongue River Road. The property consists of 10,037 acres on both the east and west side of the Tongue River. This property has 279 average annual hunter days, and game species include mule deer, whitetail deer, antelope, upland birds, and waterfowl.

[2] *Annual hunter days* refer to the number of trips made to a property each year for the purposes of hunting. All hunter day estimates presented for BMAs were provided in scoping comments submitted by Montana FWP (Montana Fish, Wildlife & Parks 2013b).

- **BMA 306 Fort Keogh.** BMA 306 consists of 55,489 acres located immediately west of Miles City and includes nearly 20 miles of Tongue River frontage. This BMA has 1,407 average annual hunter days, and game species include mule deer, whitetail deer, antelope, upland birds, and turkey.
- **BMA 311 Les Hirsch Property.** BMA 311 consists of 9,292 acres located 30 miles south of Miles City. For approximately 4.5 miles, the Tongue River forms the eastern boundary of the property. This property has 551 average annual hunter days, and game species include mule deer, whitetail deer, antelope, and upland birds.
- **BMA 314 Ted Hirsch Property.** BMA 314 consists of 6,791 acres located approximately 35 miles south of Miles City. The Tongue River runs through the property for approximately 3 miles. While the majority of the property is located on the west side of the Tongue River, the property also occupies a small portion of land on the east side of the river. This property has 379 average annual hunter days, and game species include mule deer, whitetail deer, antelope, and upland birds.
- **BMA 325 Don Bice Ranch.** BMA 325 consists of 16,260 acres located approximately 45 miles south of Miles City, west of the Tongue River. This property has 439 average annual hunter days, and game species include mule deer, whitetail deer, antelope, elk, and upland birds.

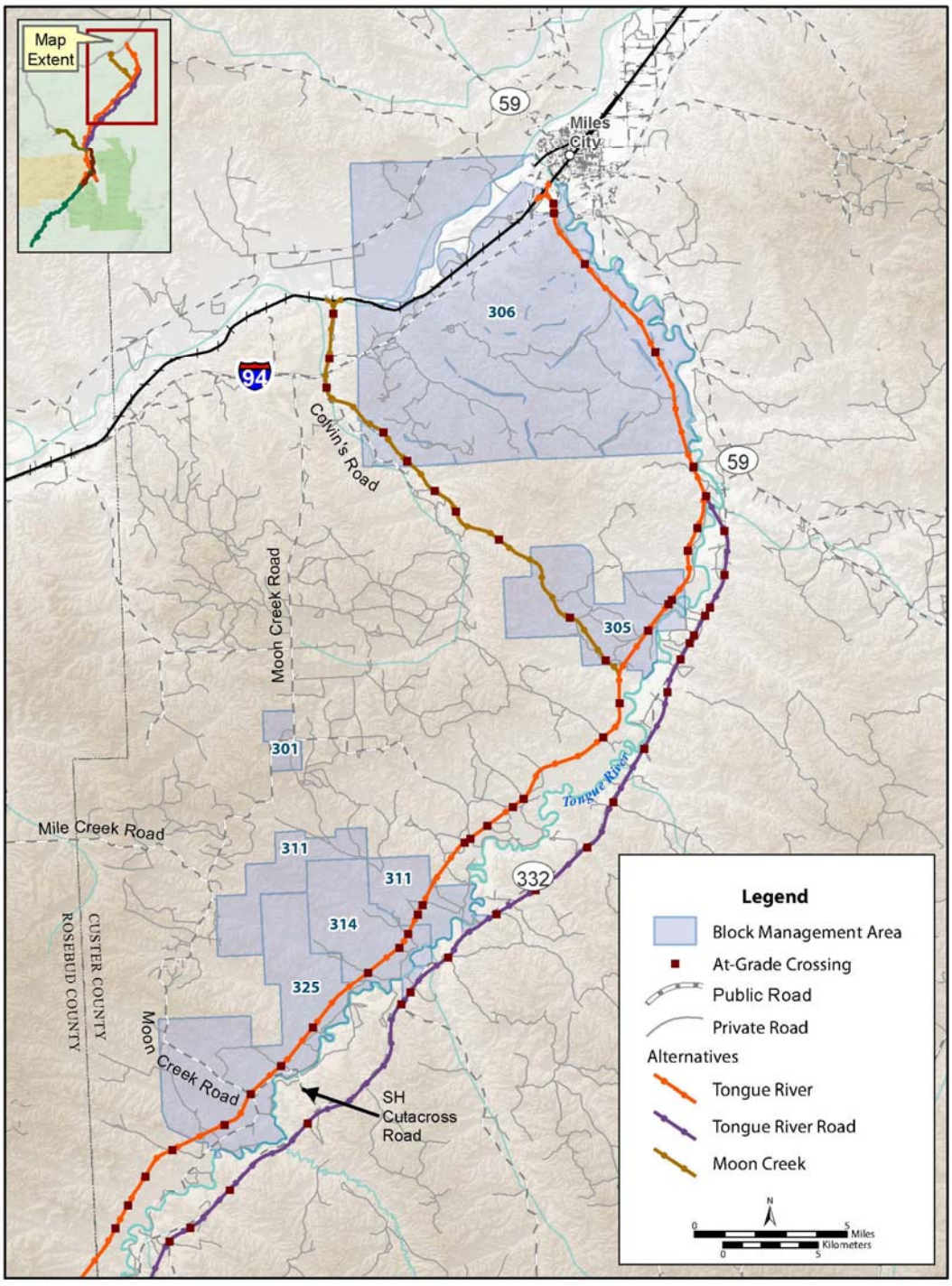

Figure 12.3-3. Block Management Areas, Map 1 of 2

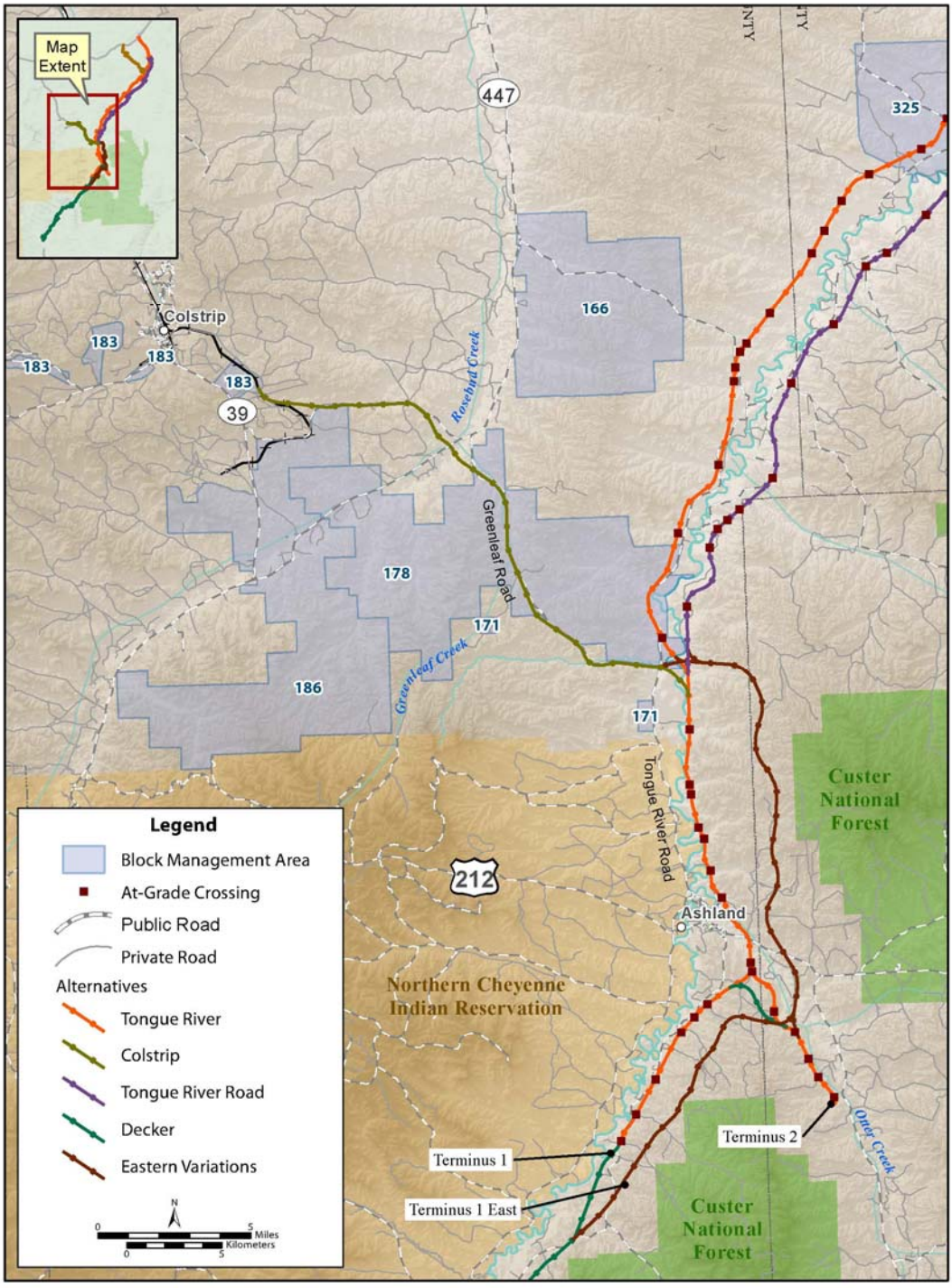

Figure 12.3-4. Block Management Areas, Map 2 of 2

Conservation Easements

Conservation easements in Montana are used for a variety of purposes such as conserving wildlife habitat, ecosystem enhancement, open space, recreation (oftentimes including hunting and fishing), and historic preservation (Knight 2004). Two conservation easements are in the study area for recreation.

- **Bice Ranch Conservation Easement.** The Bice Ranch Conservation Easement consists of 15,934 acres of land and is located approximately 45 miles south of Miles City, predominantly on the west side of the Tongue River.
- **Hirsch Ranch Conservation Easement.** The Hirsch Ranch Conservation Easement consists of the following two linked easement properties. The Ted Hirsch Conservation Easement consists of approximately 6,791 acres located 35 miles south of Miles City on both sides of the Tongue River. The Les Hirsch Conservation Easement is approximately 9,292 acres and is located 30 miles south of Miles City on the west side of the Tongue River.

Together these easements account for approximately 14 miles of Tongue River frontage. Public roads leading to the easements include Highway 332 and Moon Creek Road. Montana FWP proposed these easements in an effort to conserve the riparian, sagebrush grasslands, and plains forest habitats and to protect "in perpetuity grazing management, agricultural operations, and public hunting opportunities" (Montana Fish, Wildlife & Parks 2001). The easement properties create fishing opportunities for several warmwater fish species. Additionally, the easements are used for wildlife viewing, photography, and hiking (Montana Fish, Wildlife & Parks 2001). Landowner permission is required before the public can access the properties.

Tongue River Reservoir State Park

Tongue River Reservoir State Park is a 642-acre park managed by Montana FWP and situated approximately 10 miles north of the Montana-Wyoming border (Figure 12.3-2). The reservoir measures 12 miles long by 1 mile wide and is formed by the Tongue River Dam. Park facilities include 150 campsites, 40 of which are paved with electrical hookups, three boat launch locations, picnic areas, and two information centers. The park is accessible to the public by Tongue River Reservoir Road. Approximately 50,000 visitors from Montana and Wyoming visit the park each year (State of Montana 2014). In 2009, the last year of published data, 26,852 days fished and 531 fishing trips[3] were recorded in the reservoir (Montana Fish, Wildlife & Parks 2014e).

[3] *Days fished* refers to the estimated annual fishing use in angler days (one angler fishing in one body of water in 1 day). *Fishing trips* refers to the number of times a section of water was reported to have been fished.

The Tongue River

Recreational activities along the Tongue River include hunting, paddling, fishing, floating, scenery, and solitude (Fischer and Fischer 2008). The headwaters of the Tongue River begin in the Bighorn Mountains in Wyoming and flow northeast to the river's confluence with the Yellowstone River near Miles City, Montana. From Wyoming, the river flows through the Tongue River Dam near Decker, Montana. The Tongue River begins at the dam where the river flows north for 10 miles through a narrow canyon before meandering through an open valley, heading north to the Yellowstone River. According to the Montana Stream Access Law of 1985, rivers and streams that are accessible through public access points may be used for recreational activities such as fishing and floating, regardless of streambed ownership. Public access points for streams and rivers include adjacent public lands, public easements, public rights-of-way, and public fishing access sites.

According to Montana FWP's detailed waterbody report, game fish in the Tongue River include channel catfish (*Ictalurus punctatus*), sauger (*Sander Canadensis*), shovelnose sturgeon (*Scaphirhynchus platorynchus*), smallmouth bass (*Micropterus dolomieu*), and walleye (*Sander vitreus*) (Montana Fish, Wildlife & Parks 2014c). Other species that may occur include rainbow trout (*Oncorhynchus mykiss*), brown trout (*Salmo trutta*), northern pike (*Esox Lucius*), burbot (*Lota lota*), black crappie (*Pomoxis nigromaculatus*), white crappie (*Pomoxis annularis*), and yellow perch (*Perca flavescens*). Montana FWP recorded 2,868 days fished and 64 fishing trips in 2009 in the portion of the Tongue River located between the confluence with the Yellowstone River and Beaver Creek approximately 45 miles upstream. Montana FWP recorded 2,067 days fished and 25 fishing trips in 2009 in the portion of the Tongue River from Beaver Creek upstream to the Tongue River Dam (Montana Fish, Wildlife & Parks 2014c).

Montana Department of Natural Resources and Conservation

Tongue River Ranch

Tongue River Ranch is located approximately 30 miles southwest of Miles City (Figure 12.3-1). The ranch includes 19,824 acres of state trust land[4] and an additional 1,145 acres of BLM-administered land. DNRC manages the Tongue River Ranch as State Trust Land with revenue distributed annually to K-12 schools across the state (Section 12.2.3.1, *Land Ownership*). Under a multiple-use mandate, DNRC is required to manage this property to protect the long-term productivity of the ranch while providing a positive recreational experience for the public. All recreational use is managed with the goals of maintaining positive relationships with neighboring ranches, protecting the prairie environment, and ensuring quality recreational experiences (Montana Department of Natural Resources and

[4] Montana DNRC Trust Land Management Division is responsible for managing Montana State Trust Lands with the goal of managing resources to produce revenue for the trust beneficiaries while considering environmental factors. Montana State Trust Lands are leased for agriculture and grazing, recreational use, and oil and gas development.

Conservation 2007). One public road, Yank Creek Road, and a number of private roads provide access to the ranch.

12.3.3.3 Municipal Recreation Areas and Facilities

Spotted Eagle Recreation Area

The Spotted Eagle Recreation Area is a 245-acre, officially designated recreation area owned by the City of Miles City, Montana and located southwest of Miles City between the BNSF Railway Company (BNSF) main line and I-94 (Figure 12.3-1). Spotted Eagle Recreation Area includes Spotted Eagle Lake, wetlands habitat, varied wildlife, and tree and brush cover. On-site facilities include trails for hiking and nonmotorized use, an archery and shotgun target range, a boat ramp, fishing and swimming access to Spotted Eagle Lake, and picnic grounds. Spotted Eagle Lake is located within the larger recreational area and is stocked with a number of game species. With the exception of trolling motors (small, quiet, battery-powered motors), no motorized boats are allowed on the lake. In 2009, the last year of published data, Montana FWP recorded 4,093 days fished and 86 fishing trips (Montana Fish, Wildlife & Parks 2014d). The City of Miles City is developing a master plan for Spotted Eagle Recreation Area that will include designing and constructing new trails and picnic areas (Miles City–Custer County 2008).

12.3.4 Environmental Consequences

Impacts on recreational resources could result from construction and operation of any build alternative. The impacts common to all build alternatives are presented first, followed by impacts specific to the build alternatives.

12.3.4.1 Impacts Common to All Build Alternatives

Construction

The following construction impacts on recreational resources are common to all build alternatives.

- **Cause Temporary Loss of Access**

Because access across the proposed rail line via roads could be temporarily impeded during construction, access to recreational areas and resources could be temporarily restricted or limited during rail line construction.

- **Cause Temporary Loss of Floater Opportunities**

Any build alternative would include a bridge crossing of the Tongue River. While bridge crossings are being constructed, it may be unsafe or undesirable for floaters and paddlers to pass underneath construction activities on the Tongue River. However, the restriction

or loss of floating and paddling opportunities on the Tongue River would only occur at the location and time of bridge construction, and, as such, would be localized and temporary.

- **Cause Temporary Noise Disturbance**

Proposed rail line construction activities would generate noise that would be more noticeable in undeveloped areas, which generally have low levels of background noise. Recreationists such as hunters, hikers, campers, anglers, or floaters could hear noise generated by construction activities, which could diminish their enjoyment of recreational areas depending on the distance of the users from the railroad construction sites. This noise could also affect hunting and wildlife viewing because it could temporary scare away animals. However, noise impacts associated with construction activities would be temporary and would cease with the conclusion of construction. For more information on construction-related noise impacts, see Chapter 7, Section 7.5.1.1 *Construction Impacts Common to All Build Alternatives.*

- **Cause Localized Visual Disturbances**

Active construction and temporary staging areas near recreational resources could create visual distractions, including fugitive dust from land clearing, the presence of construction equipment, and glare from nighttime lighting used during construction. TRRC would use water for dust suppression, which would minimize visual impacts associated with dust.

Construction of any build alternative would create temporary changes in the view of and from recreational areas. Construction equipment, construction sites, staging areas, and associated facilities would introduce a heavy industrial element to a primarily rural and agricultural landscape. Construction activities within the right-of-way, including the earthwork required for construction, would create a visual disturbance for recreationists. These impacts would be most visible to recreationists adjacent to the area of the construction corridor. For more information on construction-related visual impacts, see Chapter 10, Section 10.5.1.1, *Construction Impacts Common to All Build Alternatives.*

- **Cause Fish Mortality and Avoidance**

Construction activities could result in fish mortality and avoidance, with temporary impacts on recreational fishing. Increased turbidity (cloudy water caused by suspended particles) and sedimentation, accidental release of hazardous materials, temporary and permanent removal of riparian vegetation, and increased water noise and vibration resulting from construction activities could harm or drive away fish. TRRC would construct up to 246 culverts and up to seven rail-bridge crossings, depending on the build alternative. Construction of bridges and culverts could temporarily increase turbidity and block fish movement in the streams, degrading the quality of recreational fishing near the construction site. Additionally, rail construction would require the use of hazardous

materials such as paint and petroleum products that could be toxic to fish. If an accidental spill of hazardous materials were to occur near a water body, it could affect fish and their habitat. The extent of these impacts would depend on the type and amount of material reaching surface waters, the timing of the spill (e.g., during or after spawning season), and the ecological sensitivity of the habitat. For more information on impacts on fish, see Chapter 8, Section 8.4.4.1, *Impacts Common to All Build Alternatives*. Any impacts on the health and numbers of fish in affected waterways would affect the quality of recreational fishing by decreasing the fishing stock and potentially making the fish unfit for consumption.

- **Temporarily Alter the Presence of Wildlife and Game**

Construction activities could alter the local distribution of wildlife, which could affect the experience of users engaging in recreational hunting or wildlife viewing in the study area and at the specific recreational area identified in this analysis. Impacts on hunters would depend on the timing of construction in relation to the hunting season. Such impacts would be temporary. If construction occurs from April through October, construction activities would overlap with part of the winter hunting season for big game and some upland bird species and the full spring hunting season for turkey. If construction occurs year-round, hunting could be affected for all game species.

- **Affect Recreational Land or Vistas through Road Relocations**

A number of the build alternatives would require the relocation or redirection of roads to accommodate the railroad right-of-way. Roads relocated outside the rights-of-way would alter the visual characteristics of the recreational area by replacing existing ground cover with a paved or unpaved road surface. Road relocation could also result in the abandonment of sections of the existing road. Some of the abandoned roads could be reclaimed or restored to a natural state. A loss of recreational land may be offset if the section of road that is abandoned is transferred back to recreational uses, if the areas of gained and lost road are comparable, and if the recreational values are comparable. Road relocations are not expected to restrict access to any identified recreational resource.

Operation

The following operation impacts on recreational resources are common to all build alternatives.

- **Cause Permanent Loss of Access**

The proposed rail line would create a barrier that would restrict access across the right-of-way. Because each public road crossed by the right-of-way would require the installation of a crossing, access to recreational areas by a public roadway would not be limited. The proposed rail line design includes plans to construct a number of at-grade crossings for private roads. Because TRRC would acquire all lands within the right-of-way and restrict

right-of-way crossings by installing fences, recreationists would only be able to cross the right-of-way at designated at-grade crossings. Access to some recreational resources could be delayed by train operation at the at-grade crossings or require recreationists, who may be accustomed to using a variety of different routes to access certain portions of a recreational area, to use only those with designated crossing points. Restricting access to portions of designated recreational areas would result in a permanent impact.

- **Cause Permanent Noise Disturbance**

Operation of the proposed rail line would introduce a new source of noise in some relatively undeveloped areas. Recreationists near the proposed rail line could be able to hear noise from trains and maintenance vehicles. Train horns would be a new, intermittent source of high-intensity noise at at-grade crossings, where train horn sounding would be required. Visitors could get less enjoyment from recreational areas due to the noise of trains, train horns, and maintenance vehicles or recreationists could decide not to visit these areas at all. Noise disturbance within parks and at recreational sites would be greatest for recreational areas that are in proximity to an intersection of the proposed rail line with an at-grade road crossing, where train horn sounding is required. Noise may also affect the quality of the hunting experience.

- **Change Visual Character of Recreation Experience**

Visual impacts related to recreation are described in Chapter 10, *Visual Resources*.

- **Permanently Alter the Presence of Wildlife and Game Animals**

OEA does not expect that the loss of habitat in the right-of-way would affect fishing, hunting, trapping, and wildlife viewing because of the abundance of habitat in the study area. However, the presence of the right-of-way may affect wildlife movement patterns in some places, including the recreational areas identified in this analysis. Game animals and other wildlife may avoid some areas where they are currently found. Large ungulate species are known to habituate to human disturbance including but not limited to surface coal mining activities, rural development, and road construction. Displacement is expected to be a short-term impact (Phillips et al. 1986; Polfus 2011). For more information, see Section 8.3.4.1, *Wildlife Impacts Common to all Alternatives*.

12.3.4.2 Impacts by Build Alternative

The impacts on recreational resources that are specific to each build alternative are described below and are represented in the following tables and figures.

- Table 12.3-1 identifies the recreational resources that would be affected by each build alternative.
- Table 12.3-2 identifies the linear distance and acres of conservation easements that would be affected by each build alternative.

- Table 12.3-3 presents the linear distance BMAs that would be crossed by each build alternative.
- Table 12.3-4 presents the acres of BMAs that would be crossed by each build alternative.
- Table 12.3-5 presents the linear distance and acres of Tongue River Ranch and Pumpkin Creek Ranch that would be crossed by each build alternative.
- Table 12.3-6 presents the acres of BMAs that would be affected by road relocations outside of the right-of-way.
- Table 12.3-7 presents the acres of conservation easements and the Tongue River Ranch that would be affected by road relocations outside of the right-of-way.

Table 12.3-1. Recreational Resources Affected by Each Build Alternative

Build Alternative	Spotted Eagle Recreation Area	Conservation Easements	Block Management Areas	Tongue River Ranch	Twelve Mile Dam	Pumpkin Creek Ranch and Recreation Area	Custer National Forest	Zook Creek Wilderness Study Area	Wolf Mountain Battlefield	Tongue River Reservoir State Park
Tongue River	X	X	X	X	X		X			
Tongue River East	X	X	X	X	X		X			
Colstrip			X				X			
Colstrip East			X				X			
Tongue River Road	X	X	X		X	X	X			
Tongue River Road East	X	X	X		X	X	X			
Moon Creek		X	X	X			X			
Moon Creek East		X	X	X			X			
Decker							X	X	X	X
Decker East							X	X	X	X

Table 12.3-2. Conservation Easements Crossed by Each Build Alternative

Build Alternative	Linear Miles Crossed	Acreage in Right-of-Way
Tongue River	10.2	421.9
Tongue River East	10.2	421.9
Colstrip	0.0	0.0
Colstrip East	0.0	0.0
Tongue River Road	0.2	2.0
Tongue River Road East	0.2	2.0
Moon Creek	10.2	421.9
Moon Creek East	10.2	421.9
Decker	0.0	0.0
Decker East	0.0	0.0

Source: Muscha pers. comm.

Table 12.3-3. Linear Miles of Block Management Areas Crossed by Each Build Alternative

	Block Management Area								
Build Alternative	**178**	**183**	**186**	**305**	**306**	**311**	**314**	**325**	**Total[a]**
Tongue River	4.1	0.0	0.0	3.2	9.4	1.4	2.6	7.6	28.3
Tongue River East	4.1	0.0	0.0	3.2	9.4	1.4	2.6	7.6	28.3
Colstrip	5.7	0.1	0.9	0.0	0.0	0.0	0.0	0.0	6.7
Colstrip East	6.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0	7.0
Tongue River Road	0.0	0.0	0.0	0.0	9.4	0.0	0.0	0.0	9.4
Tongue River Road East	0.0	0.0	0.0	0.0	9.4	0.0	0.0	0.0	9.4
Moon Creek	4.1	0.0	0.0	4.5	2.2	1.4	2.6	7.6	22.4
Moon Creek East	4.1	0.0	0.0	4.5	2.2	1.4	2.6	7.6	22.4
Decker	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Decker East	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:
[a] Totals may reflect a slight rounding error
Source: Muscha pers. comm.

Table 12.3-4. Block Management Areas Affected by the Rights-of-Way (acres)

	Block Management Area								
Build Alternative	**178**	**183**	**186**	**305**	**306**	**311**	**314**	**325**	**Total**
Tongue River	182	0	0	176	346	50	97	326	1,177
Tongue River East	182	0	0	176	346	50	97	326	1,177
Colstrip	235	1	36	0	0	0	0	0	273
Colstrip East	265	1	36	0	0	0	0	0	302
Tongue River Road	0	0	0	0	346	3	0	0	349
Tongue River Road East	0	0	0	0	346	3	0	0	349
Moon Creek	182	0	0	361	106	50	97	326	1,122
Moon Creek East	182	0	0	361	106	50	97	326	1,122
Decker	0	0	0	0	0	0	0	0	0
Decker East	0	0	0	0	0	0	0	0	0

Notes:
[a] Totals may reflect a slight rounding error
Source: Muscha pers. comm.

Table 12.3-5. Tongue River Ranch and Pumpkin Creek Ranch and Recreation Area Crossed by Each Build Alternative

Build Alternative	Tongue River Ranch Linear Miles Crossed	Tongue River Ranch Acreage in Right-of-Way	Pumpkin Creek Linear Miles Crossed	Pumpkin Creek Acreage in Right-of-Way
Tongue River	5.3	229	0	0
Tongue River East	5.3	229	0	0
Colstrip	0.0	0	0	0
Colstrip East	0.0	0	0	0
Tongue River Road	0.0	0	1	52.8
Tongue River Road East	0.0	0	1	52.8
Moon Creek	5.3	229	0	0
Moon Creek East	5.3	229	0	0
Decker	0.0	0	0	0
Decker East	0.0	0	0	0

Notes:
Source: Muscha pers. comm.

Table 12.3-6. Block Management Areas Affected by Road Relocations (acres)

	Block Management Area								
Build Alternative	**178**	**183**	**186**	**305**	**306**	**311**	**314**	**325**	**Total[a]**
Tongue River	6.1	0.0	0.0	0.2	1.6	0.7	<0.1	0.0	8.6
Tongue River East	6.1	0.0	0.0	0.2	1.6	0.7	<0.1	0.0	8.6
Colstrip	13.4	0.0	1.4	0.0	0.0	0.0	0.0	0.0	14.8
Colstrip East	13.4	0.0	1.4	0.0	0.0	0.0	0.0	0.0	14.8
Tongue River Road	0.0	0.0	0.0	0.0	1.6	1.3	0.0	0.0	2.9
Tongue River Road East	0.0	0.0	0.0	0.0	1.6	1.3	0.0	0.0	2.9
Moon Creek	6.1	0.0	0.0	2.4	0.0	0.7	<0.1	0.0	9.1
Moon Creek East	6.1	0.0	0.0	2.4	0.0	0.7	<0.1	0.0	9.1
Decker	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Decker East	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes:
[a] Totals may reflect a slight rounding error.

Table 12.3-7. Other Recreational Resources Affected by Road Relocations (acres)

	Recreational Resources		
	Conservation Easement		
Build Alternative	Hirsch Ranch	Tongue River Ranch	Total[a]
Tongue River	0.7	1.0	1.7
Tongue River East	0.7	1.0	1.7
Colstrip	0.0	0.0	0.0
Colstrip East	0.0	0.0	0.0
Tongue River Road	1.2	0.0	1.2
Tongue River Road East	1.2	0.0	1.2
Moon Creek	0.7	1.0	0.7
Moon Creek East	0.7	1.0	0.7
Decker	0.0	0.0	0.0
Decker East	0.0	0.0	0.0

Notes:
[a] Totals may reflect a slight rounding error

Tongue River Alternatives

Tongue River Alternative

Twelve Mile Dam Fishing Access Site

This Montana FWP-administered site provides public access to high-quality waters for recreational opportunities such as fishing, boating, and rafting. The Twelve Mile Dam Fishing Access Site is located on the east bank of the Tongue River approximately 0.5 mile east of the Tongue River Alternative (Table 12.3-1, Figure 12.3-1). Users of this site would likely be able to hear noise associated with construction and operation of the Tongue River Alternative. Passing trains would also be visible from certain points in the fishing access site. Because of these noise and visual disturbances, recreational enjoyment of the area may be diminished and recreationists could decide not to visit the site.

Conservation Easements

The Tongue River Alternative would cross two conservation easements: the Bice Ranch Conservation Easement and the Hirsch Ranch Conservation Easement (Figure 12.2-4). This build alternative would travel approximately 10.2 miles on conservation easement land and would require the acquisition and conversion of approximately 421.9 acres of these conservation easements to the right-of-way (Table 12.3-2). The use of all other parts of the conservation easements would be maintained.

The Tongue River Alternative would cross approximately 7.5 miles of the Bice Ranch conservation easement along the eastern border, leaving approximately 9,276 acres of the conservation easement on the western side of the right-of-way and approximately 3,264 acres

on the eastern side of the right-of-way. This build alternative would create a barrier to movement. Recreationists would only be able to cross from one side of the easement to the other at the designated at-grade crossing on Moon Creek Road within the conservation easement and at three other at-grade crossings along private roads in the conservation easement.

The Tongue River Alternative would cross the Hirsch Ranch conservation easement for approximately 2.7 miles, separating the 10,897-acre portion on the western side of the right-of-way from a 2,312-acre portion on the eastern side of the right-of-way (Figure 12.2-4. Unlike with the Bice Ranch conservation easement, no public roads provide access to the portion of the conservation easement west of the Tongue River. There are a number of private roads inside the conservation area. The Tongue River Alternative would include plans to construct five at-grade crossings on private roads inside the conservation easement. Because TRRC would acquire all lands within the right-of-way and restrict crossing the right-of-way by constructing fences, recreationists would be able to cross the proposed rail line only at these designated at-grade crossings, limiting their movement in the conservation easement. Additionally, approximately 0.7 acre of the Hirsch Ranch conservation easement would be affected by the road relocations outside the Tongue River Alternative right-of-way (Table 12.3-7).

Block Management Areas

The Tongue River Alternative would cross 28.3 miles of BMA lands and require the acquisition and conversion of 1,177 acres of land to the right-of-way.

The Tongue River Alternative would cross approximately 4.1 miles of the eastern border of BMA 178 and require the conversion of 182 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4). The build alternative would separate approximately 966 acres of the BMA east of the right-of-way from the remaining 31,158 acres of BMA west of the right-of-way. This build alternative would follow the western side of Tongue River Road through BMA 178. The Tongue River Alternative would include plans to construct one at-grade crossing near the southeastern corner of the BMA, allowing access to the BMA on both sides of the build alternative. Additionally, approximately 6.1 acres of BMA 178 would be affected by the road relocations outside the Tongue River Alternative right-of-way (Table 12.3-6).

The Tongue River Alternative would cross approximately 3.2 miles of BMA 305 along the eastern border of the BMA and require the conversion of 176 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-3). Approximately 1,137 acres of BMA 305 would be located on the east of the right-of-way and west of the Tongue River, while 8,558 acres would be located west of the right-of-way. There are no public roads in BMA 305. However, a number of private roads are located in the area. The Tongue River Alternative would include plans to construct three at-grade crossings for these private roads in this BMA, creating points at which recreationists could cross the alignment inside BMA 305.

Additionally, approximately 0.2 acre of BMA 305 would be affected by the road relocations outside the Tongue River Alternative right-of-way (Table 12.3-6).

The Tongue River Alternative would cross approximately 9.4 miles of BMA 306 and require the acquisition and conversion of 346 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-3). An approximately 2,131-acre portion of BMA 306 would be located east of this build alternative and west of the Tongue River. No public roads exist in this separated piece of land. However, a number of private roads are maintained by USDA throughout the BMA. The Tongue River Alternative would include plans to construct two at-grade crossings for these private roads in BMA 306. This would limit movement within the BMA. Additionally, approximately 1.6 acres of BMA 306 would be affected by the road relocations outside the Tongue River Alternative right-of-way (Table 12.3-6).

The Tongue River Alternative would cross approximately 1.4 miles of BMA 311 near the adjoining border of the Tongue River Ranch and require the acquisition and conversion of 50 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-3). This build alternative would separate approximately 1,929 acres of the BMA located between the right-of-way and the Tongue River Alternative from the remaining 7,225 acres of the BMA, located west of the right-of-way. Although no public roads exist in BMA 311, there are private roads for authorized users of the BMA to access and travel within the BMA. The Tongue River Alternative would include plans to construct two at-grade crossings for these private roads, creating the only points at which recreationists could cross the build alternative inside BMA 311. Additionally, approximately 0.7 acre of BMA 311 would be affected by the road relocations outside the Tongue River Alternative right-of-way (Table 12.3-6).

The Tongue River Alternative would cross approximately 2.6 miles of the southeastern portion of BMA 314 and require the acquisition and conversion of 97 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-3). This build alternative would separate approximately 1,386 acres of the BMA east of the right-of-way and west of the Tongue River Alternative from the remaining 6,938 acres of the BMA northwest of the right-of-way. Although no public roads exist within BMA 314, there are private roads for authorized users of the BMA to access and travel within the BMA. The Tongue River Alternative would include plans to construct three at-grade crossings for these private roads, which would be the only points at which recreationists could cross this build alternative inside BMA 314. Less than 0.1 acre of BMA 314 would be affected by the road relocations outside the Tongue River Alternative right-of-way (Table 12.3-6).

The Tongue River Alternative would cross approximately 7.6 miles of the southeastern portion of BMA 325 and require the acquisition and conversion of 326 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-3). This build alternative would separate approximately 3,269 acres of the BMA east of the right-of-way from 13,115 acres of the BMA northwest of the right-of-way. Two public roads lead to and travel within BMA 325, and there are private roads for authorized users of the BMA to travel within the BMA. The Tongue River Alternative would include plans to construct an at-grade crossing where

this build alternative would cross Moon Creek Road as well as two additional at-grade crossings at private roads. These three at-grade crossings would create the only points at which recreationists could cross this build alternative inside BMA 325.

Tongue River Ranch

The Tongue River Alternative would cross through approximately 5.3 miles of Tongue River Ranch on the ranch's southeastern border near the Tongue River and require the acquisition and conversion of 229 acres of land to the right-of-way (Table 12.3-5, Figure 12.2-4. This build alternative would separate approximately 2,872 acres of the ranch southeast of the right-of-way from the remaining 16,630 acres of the ranch. Tongue River Ranch can be accessed by Yank Creek Road, which leads into the ranch from the west, and there are roads that allow for travel within Tongue River Ranch. The Tongue River Alternative would include plans to construct five at-grade crossings on private roads to allow access to both sides of the right-of-way within Tongue River Ranch. Additionally, approximately 1.0 acre of the Tongue River Ranch would be affected by the road relocations outside the Tongue River Alternative right-of-way (Table 12.3-7).

Spotted Eagle Recreation Area

The Tongue River Alternative would cross through the Spotted Eagle Recreation Area and would result in the acquisition and conversion of approximately 11 acres of the recreational area to the right-of-way (Figure 12.3-1). The recreational area is approximately 100 feet from the BNSF main line, and noise from existing train traffic is already perceptible to recreationists. The Tongue River Alternative would be visible from the entry access point on Spotted Eagle Road. This build alternative would meet with the existing BNSF main line southwest of Spotted Eagle Road and would appear visually similar to the existing rail line.

Tongue River East Alternative

The Tongue River East Alternative would follow the same route as the Tongue River Alternative south from Miles City for approximately 58 miles. In this area, the Tongue River East Alternative would result in identical impacts on recreational resources as described above for the Tongue River Alternative.

Approximately 8.5 miles north of Ashland, the Tongue River East Alternative would head east for approximately 2 miles before turning south towards the terminus points (Figure 12.3-1). At its nearest point, the Tongue River East Alternative would come within 0.5 mile of the Cook Mountain Hiking and Riding Area in the Custer National Forest. Noise or perceptible visual disturbances resulting from construction and operation of the Tongue River East Alternative could diminish recreationists' enjoyment of the National Forest. However, these areas would constitute a small fraction of the overall Custer National Forest in general and the Cook Mountain Hiking and Riding Area in particular. The road relocations associated with the Tongue River East Alternative would affect the same acreage of BMAs and conservation easements as the road relocations for the Tongue River Alternative.

Colstrip Alternatives

Colstrip Alternative

Block Management Areas

The Colstrip Alternative would cross 6.7 miles of BMA lands and require the acquisition and conversion of 273 acres of land to the right-of-way.

The Colstrip Alternative would cross 5.7 miles of BMA 178 from the southwestern border and require the acquisition and conversion of 235 acres of land to the right-of-way. This build alternative would bisect the BMA, leaving approximately 18,000 acres of the BMA to the east and 14,000 acres to the west of the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4). The Colstrip Alternative includes plans to construct four at-grade crossings, three of which would be located on Greenleaf Road and one located on a private road. Both the eastern and western portions of BMA 178 would be accessible via Greenleaf Road. Additionally, the eastern portion of the BMA would be accessible by the Tongue River Road. While all areas of the BMA would be accessible, access from one side of the right-of-way to the other would be restricted to the designated at-grade crossings, which is described in more detail in the discussion of impacts common to all build alternatives. Additionally, approximately 13.4 acres of BMA 178 would be affected by the road relocations outside the Colstrip Alternative right-of-way (Table 12.3-6).

The Colstrip Alternative would cross 0.1 mile of BMA 183 and require the acquisition and conversion of 1 acre of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4).

The Colstrip Alternative would cross approximately 0.9 mile of BMA 186 and would require the acquisition and conversion of 36 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4). This represents less than 1 percent of the total 31,400-acre area of the BMA. Additionally, approximately 1.4 acres of BMA 186 would be affected by the road relocations outside the Colstrip Alternative right-of-way (Table 12.3-6).

Colstrip East Alternative

Approximately 8.5 miles north of Ashland, the Colstrip East Alternative would deviate from the Colstrip Alternative and would follow a route that is nearly identical to that of the Tongue River East Alternative. As such, the Colstrip East Alternative would result in the same impacts on the Custer National Forest and the designated Cook Mountain Hiking and Riding Area as those described for the Tongue River East Alternative.

Block Management Areas

The Colstrip East Alternative would cross 7.0 miles of BMA lands and require the acquisition and conversion of 302 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4).

The Colstrip East Alternative would follow a route identical to that of the Colstrip Alternative between Colstrip and the Tongue River. In this area, the Colstrip East Alternative would result in identical impacts on BMA 186 as those described above for the Colstrip Alternative.

The Colstrip East Alternative would cross 6.0 miles of BMA 178 from the southwestern border and would require the acquisition and conversion of 265 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4).

The road relocations associated with the Colstrip East Alternative would affect the same acreage of BMAs as the road relocations for the Colstrip Alternative, described above.

Tongue River Road Alternatives

Tongue River Road Alternative

The Tongue River Road Alternative would result in identical impacts on the Twelve Mile Dam Fishing Access Site and the Spotted Eagle Recreation Area as those described above for the Tongue River Alternative. While the Tongue River Road Alternative would not require the acquisition and conversion of conservation easement land, the road relocations associated with this build alternative would require the conversion of 1.2 acres of Hirsch Ranch Conservation Easement (Table 12.3-7).

The Tongue River Road Alternative would traverse nearly 1 mile and affect approximately 52.8 acres of the northwestern corner of the Pumpkin Creek Ranch and Recreation Area (Table 12.3-5, Figure 12.3-1). This build alternative would intersect the property and sever approximately 32 acres of land from the rest of the recreation area. The severed portion of land would remain accessible to users via Tongue River Road. Depending on a viewer's location and proximity to the rail line, impacts may include close-up and direct views of cut and fill, vegetation removal, and road relocations. Noise associated with rail operation may be perceptible in portions of the recreational area nearest to the rail line and would decrease with distance traveled from the rail line. OEA expects that localized visual and noise disturbances would be limited to areas in the northwestern corner of the property.

Block Management Areas

The Tongue River Road Alternative would cross 9.4 miles of BMA lands and require the acquisition and conversion of 349 acres of land to the right-of-way.

The Tongue River Road Alternative right-of-way would come within 250 feet of BMA 178, 0.25 mile of BMA 305, 200 feet of BMA 314, and less than 0.25 mile of BMA 325.

This build alternative would cross and require the same amount of BMA 306 land as described for the Tongue River Alternative (Tables 12.3-3 and 12.3-4, Figure 12.3-4). Additionally, approximately 1.6 acres of BMA 306 would be affected by the road relocations outside the Tongue River Road Alternative right-of-way (Table 12.3-6).

The Tongue River Road Alternative would require the acquisition and conversion of approximately 3 acres of BMA 311 land (0.03 percent) along the BMA's eastern border. The Tongue River Road Alternative includes plans to construct at-grade crossings where this build alternative would cross public roads leading to BMAs 305, 325, 314, and 178; therefore, recreational access would not be affected. User enjoyment could decrease due to visual and noise impacts associated with construction and operation of the proposed rail line. However, such impacts would be local and limited to the eastern side of these BMAs. Additionally, approximately 1.3 acres of the BMA 311 would be affected by the road relocations outside the Tongue River Road Alternative right-of-way (Table 12.3-6).

Tongue River Road East Alternative

The Tongue River Road East Alternative would result in identical impacts on recreation as those described above for the Tongue River Road Alternative. The Tongue River Road East Alternative would also result in potential impacts on recreational use of the Custer National Forest identical to those described for the Tongue River East Alternative. The road relocations associated with the Tongue River Road East Alternative would affect the same acreage of BMA 306 and BMA 311 as the road relocations for the Tongue River Road Alternative.

Moon Creek Alternatives

Moon Creek Alternative

The Moon Creek Alternative would result in identical impacts on recreational use of the Bice Conservation Easement, the Hirsch Conservation Easement, and the Tongue River Ranch as those described above for the Tongue River Alternative.

Lewis and Clark Trail Special Recreation Management Area

Approximately 3,000 feet of the proposed rail line would be constructed in the Lewis and Clark Trail Special Recreation Management Area to connect either of the Moon Creek Alternative to the existing BNSF main line. Because the main line is already located inside the area, the potentially affected area consists entirely of privately owned land, and none of the area's recreational sites or facilities would be located near the proposed rail line, the Moon Creek Alternatives would not affect the Lewis and Clark Trail Special Recreation Management Area.

Block Management Areas

The Moon Creek Alternative would cross 22.4 miles of BMA lands and require the acquisition and conversion of 1,121 acres of land to the right-of-way.

The Moon Creek Alternative would result in the same acreage and linear mile impacts on BMA 178, BMA 311, BMA 314, and BMA 325 as described for the Tongue River

Alternative. Additionally, road relocations outside the Moon Creek Alternative would result in the same acreage impacts on BMA 178, BMA 311, and BMA 314 as described for the Tongue River Alternative.

The Moon Creek Alternative would cross 4.5 miles of BMA 305 and require the acquisition and conversion of 361 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4). This crossing would separate approximately 2,572 acres of BMA 305 southwest of the right-of-way from the remaining 6,939 acres northeast of the right-of-way. The Moon Creek Alternative includes plans to construct two at-grade crossings at private roads, which would allow for movement across the right-of-way. Additionally, approximately 2.4 acres of BMA 305 would be affected by road relocations outside the Moon Creek Alternative right-of-way (Table 12.3-6).

The Moon Creek Alternative would cross 2.2 miles of the southwestern corner of BMA 306, located in Fort Keogh, and require the acquisition and conversation of 106 acres of land to the right-of-way (Tables 12.3-3 and 12.3-4, Figure 12.3-4). This crossing would separate approximately 858 acres of land from the remaining 55,000 acres. This segmented corner of BMA 306 would continue to be accessible by Colvin's Road. The Moon Creek Alternative includes plans to construct two at-grade crossings at private roads, which would allow for movement across the right-of-way. User enjoyment of BMA 306 could decrease because of visual and noise impacts; however, OEA anticipates that these impacts would be limited to areas in the southwestern corner of the property.

Moon Creek East Alternative

The Moon Creek East Alternative would result in identical impacts on recreational resources as those described above for the Moon Creek Alternative. The Moon Creek East Alternative would also result in potential impacts on recreational use of the Custer National Forest identical to those described for the Tongue River East Alternative. The road relocations associated with the Moon Creek East Alternative would affect the same acreage of BMAs as the road relocations for the Moon Creek Alternative.

Decker Alternatives

Decker Alternative

The Decker Alternative would not cross or require the acquisition and conversion of any BMA land to the right-of-way (Tables 12.3-3 and 12.3-4). The Decker Alternative could affect recreationists' enjoyment of the Custer National Forest, Zook Creek Wilderness Study Area, Wolf Mountain Battlefield National Historic Landmark, and Tongue River Reservoir State Park. However, the Decker Alternative would not result in the acquisition or conversion of lands to the right-of-way from any of these recreational areas.

Custer National Forest

The Decker Alternative would be located between the Custer National Forest and the Tongue River for approximately 14 miles. This build alternative would be approximately 1.1 miles from the forest near the King Mountain Hiking and Riding Area and approximately 400 feet from the forest near the Tongue River Breaks Hiking and Riding Area (Figure 12.3-2). The Decker Alternative includes plans to construct eight at-grade crossings where the Decker Alternative would cross three public roads and five private roads that provide access to the forest. Construction and operation of the Decker Alternative could cause noise or visual disturbances, which could diminish enjoyment of the forest. These areas would constitute a small fraction of the forest and Tongue River Breaks and King Mountain Hiking and Riding Areas. Noise and visual disturbances resulting from construction of any build alternative would be short term and temporary in nature.

Zook Creek Wilderness Study Area

The Decker Alternative would not cross the Zook Creek WSA. However, the right-of-way would be located as close as 855 feet from the southeastern corner of the property. Construction and operation of the Decker Alternative could cause noise disturbances perceptible from limited areas within the Zook Creek WSA. Intervening topography and vegetation would limit most views of the alternative from the WSA. The Decker Alternative includes plans to construct at-grade crossings on private roads leading to the WSA that would be crossed by the rail line. This would allow for continued access to the WSA.

Wolf Mountain Battlefield National Landmark

The Decker Alternative would approach but would not cross the northern border of the Wolf Mountain Battlefield National Historic Landmark, and the right-of-way would not require the acquisition and conversion of any land inside the area. At its closest point, the Decker Alternative would be located approximately 0.75 mile from the portion of the Tongue River Road that is the only publicly accessible part of the landmark. This build alternative may be visible from certain areas along the road depending on the vegetation and topography.

Tongue River Reservoir State Park

The distance between the Decker Alternative right-of-way and Tongue River Reservoir State Park would range from approximately 150 feet at the northern tip of the park to approximately 8,700 feet at the western side of the park. While none of the parkland would be acquired and converted to the right-of-way by the Decker Alternative, portions of the cut and fill slopes necessary to construct the Decker Alternative would be visible from the park. The park has five campgrounds and two boat launch areas, all of which are more than 1 mile from the right-of-way. The nearest campground to the Decker Alternative would be the Sand Point campground, located 1.5 miles from the edge of the right-of-way. Any noise generated by construction and operation of the Decker Alternative perceptible at these campgrounds or by general park users would be minimal.

Decker East Alternative

The Decker East Alternative would result in identical impacts on recreational resources as those described for the Decker Alternative, with the exception of impacts on Custer National Forest. The Decker East Alternative would run closer to the Custer National Forest at its northern end. The Decker East Alternative would also come within 230 feet of the King Mountain Hiking and Riding Area (Figure 12.3-2). Impacts on the forest would consist primarily of noise and visual disturbance to recreationists. The variable terrain, vegetation, and distance from the main recreational areas of the forest would generally limit impacts. Noise or visual impacts from construction and operation of the Decker East Alternative would be more perceptible from the King Mountain Hiking and Riding Area than from any impacts caused by construction and operation of the Decker Alternative.

12.3.4.3 No-Action Alternative

Under the No-Action Alternative, TRRC would not construct and operate the proposed Tongue River Railroad, and there would be no impacts on recreational resources from construction or operation of the proposed rail line.

12.3.4.4 Mitigation and Unavoidable Environmental Consequences

To avoid or minimize environmental impacts on recreational resources from the proposed rail line, OEA is recommending that the Board impose four mitigation measures (Chapter 19, Section 19.2.9, *Land Resources*). These measures would require TRRC to consult with public agencies and other user groups to develop a plan to limit construction impacts on recreation resources, coordinate with landowners during easement negotiations to provide adequate at-grade crossings on private roads to maintain access for recreationists, direct nighttime lighting toward construction areas and away from recreational areas, and adhere to reasonable mitigation conditions imposed by the USDA in any easement allowing TRRC to cross the Fort Keogh Livestock and Range Research Laboratory.

Even with the implementation of OEA's recommended mitigation measures, construction and operation of the proposed rail line would cause unavoidable impacts on recreational resources. These impacts could include diminished experiences for recreationists engaged in hunting, fishing, and wildlife viewing through visual and noise disturbances; the acquisition and conversion of recreational lands; and restriction or loss of access to certain recreational areas affected by the right-of-way. OEA concludes that these adverse impacts would range from minor to moderate.

12.4 Section 4(f) and 6(f) Evaluation Summary

This section summarizes the findings of the draft evaluation of the potential impacts on resources protected under Section 4(f) of the Department of Transportation Act of 1966, as originally set forth in 49 United States Code [U.S.C.], § 1653(f) and later amended, and Section 6(f) of the Land and Water Conservation Fund Act (LWCF). Appendix Q, *Draft Section 4(f) and Section 6(f) Evaluation*, provides the full draft evaluation.

12.4.1 Section 4(f) Draft Evaluation Summary

OEA has determined that the proposed rail line would affect one property that is subject to Section 4(f): the Spotted Eagle Recreation Area (Figure 12.4-1). Specifically, the Tongue River Alternatives and Tongue River Road Alternatives would result in *direct use*[1] of the Spotted Eagle Recreation Area. Any one of these build alternatives would result in the permanent incorporation of approximately 11 acres of the Section 4(f) property into the railroad right-of-way. The area potentially affected by the railroad right-of-way would constitute less than 5 percent of the total area of the property and would be located along the western periphery, away from developed recreational features and areas likely to be used by visitors. Recreational users currently experience audible and visual disturbances from vehicular traffic along roads in and adjacent to the property, and train traffic along the BNSF main line that forms the northern border of the property. As such, a perceptible level of *anthropogenic disturbance* is an existing attribute of this property. If any one of the two Tongue River Alternatives or the two Tongue River Road Alternatives is licensed by the Board, OEA is recommending that the Board impose three mitigation measures (Chapter 19, Section 19.2.9, *Land Resources*). These measures would require TRRC to plant a tree buffer between the Spotted Eagle Recreation Area and the railroad right-of-way, to consult with the City of Miles City to develop a means to offset potential losses of recreational use of the property, and to consult with the City of Miles City to develop a plan that limits construction impacts on the property.

For these reasons, OEA concludes that construction and operation of any of the Tongue River Alternatives or Tongue River Road Alternatives would not adversely affect the activities, features, and attributes of the Spotted Eagle Recreation Area qualifying it for protection under Section 4(f). As such, OEA intends to recommend and seek concurrence from the Federal Highway Administration for a *de minimis* impact determination for these build alternatives as they pertain to the Spotted Eagle Recreation Area. As defined in 23 Code of Federal Regulations (C.F.R.) § 774.17, a *de minimis* impact for parks and recreation areas is one that, "will not adversely affect the activities, features, or attributes, or activities qualifying the property for protection under Section 4(f)."

[1] Terms italicized at first use are defined in Chapter 25, *Glossary*. Many of the terms italicized in this section and Appendix Q, *Draft Section 4(f) and Section 6(f) Evaluation*, have meanings specific to Section 4(f) regulations.

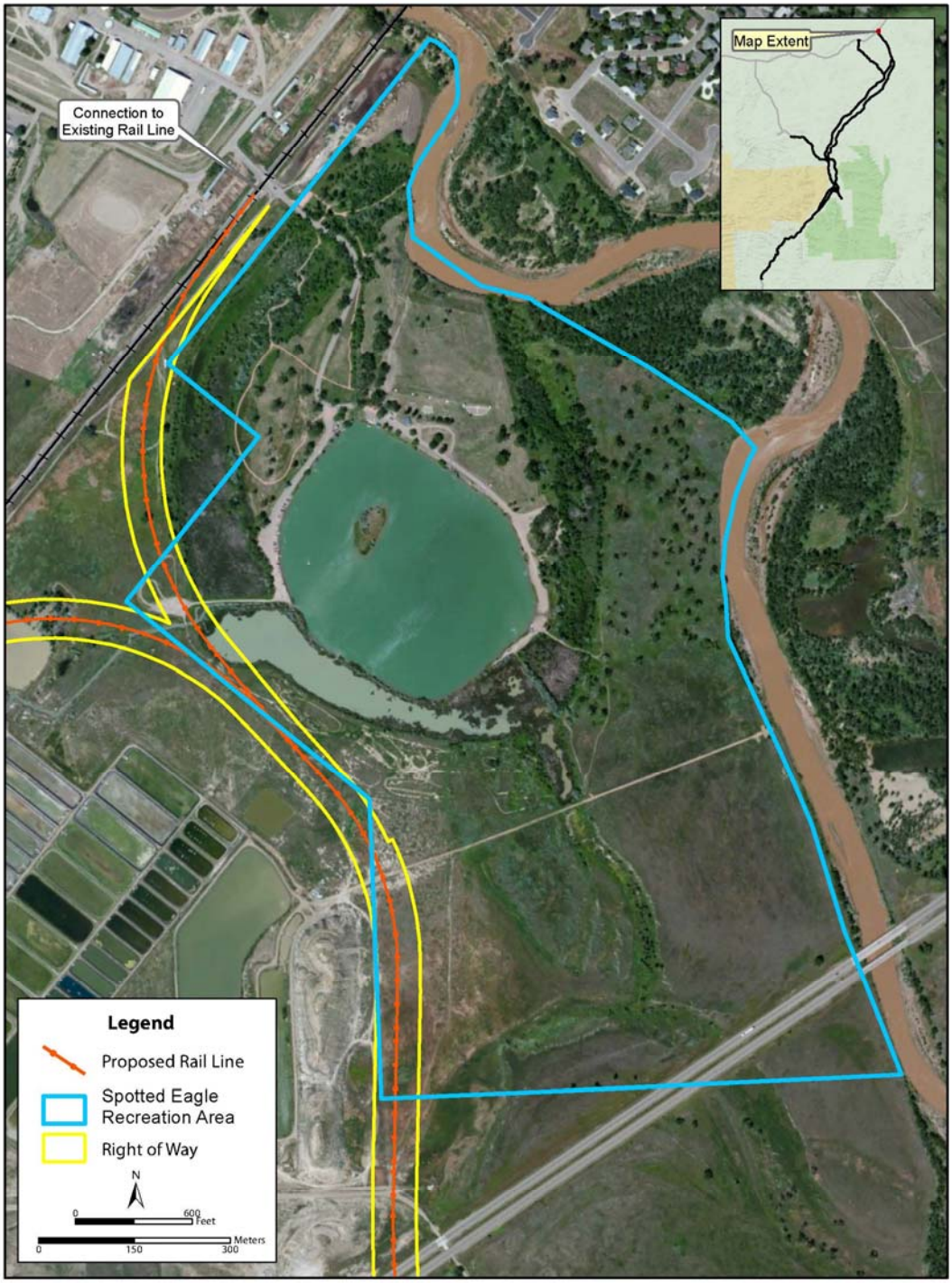

Figure 12.4-1 Spotted Eagle Recreation Area

OEA has also identified cultural resources that may be eligible for protection under Section 4(f); however, the significance of these resources has not yet been determined by officials with jurisdiction. Because the effects on all potentially eligible cultural resources cannot be fully determined prior to the construction phase of the proposed rail line, OEA engaged in a phased resource identification approach and has developed a Section 106 Programmatic Agreement (Appendix P of this Draft EIS). Significant cultural resources eligible for protection under Section 4(f) that could be encountered during construction would be addressed by the Programmatic Agreement. Additionally, the Programmatic Agreement establishes responsibilities for the treatment of historic properties, the implementation of mitigation measures, and ongoing consultation efforts, thereby ensuring that harm would be minimized to cultural resources.

12.4.2 Section 6(f) Draft Evaluation Summary

The Spotted Eagle Recreation Area is the only potentially affected property that has received funding from LWCF. A portion of the Spotted Eagle Recreation Area, approximately 11 acres on the western side of the property, would be permanently converted from recreational to nonrecreational uses if any of the Tongue River Alternatives or Tongue River Road Alternatives is authorized by the Board. If one of these alternatives were authorized by the Board, OEA is recommending that the Board impose one mitigation measure (Chapter 19, Section 19.2.9, *Land Resources*) that would require TRRC to prepare a 6(f) conversion plan in consultation with Montana Fish, Wildlife & Parks.

No properties protected by LWCF Section 6(f) would be affected by any other build alternative.

12.5 Hazardous Waste Sites

This section describes the impacts related to hazardous waste sites that would result from construction and operation of each of the build alternatives. The subsections that follow describe the hazardous waste study area, the methods used to analyze the impacts, the affected environment, and the impacts of the build alternatives on hazardous waste sites. The regulations and guidance related to hazardous waste are summarized in Section 12.6, *Applicable Regulations*. Appendix R, *Hazardous Waste Sites*, provides further data on hazardous waste sites. The contribution of the proposed rail line to cumulative impacts on hazardous waste sites is discussed in Chapter 18, *Cumulative Impacts*.

In summary, OEA identified seven hazardous waste sites in the study area. OEA concludes that the proposed rail line would not affect or be affected by hazardous waste sites.

12.5.1 Study Area

OEA defined the study area for hazardous waste sites as the area within 1,500 feet of either side of the rights-of-way of the build alternatives. In addition, OEA identified and evaluated sites with a high potential to cause environmental impacts, such as Superfund sites, landfills, or large-quantity hazardous waste generators, located outside the 1,500-foot study area but within a records search area (Section 12.5.2.2, *Data Collection*).

12.5.2 Analysis Methods

OEA used the following methods to identify hazardous waste sites and evaluate the sites' potential to affect or be affected by construction and operation of the build alternatives.

12.5.2.1 Hazardous Waste Definition

The U.S. Environmental Protection Agency (USEPA) defines hazardous waste as waste that is dangerous or potentially harmful to human health or the environment. Hazardous wastes, which can be liquids, solids, gases, or sludges, are generally discarded commercial products or the byproducts of manufacturing processes (U.S. Environmental Protection Agency 2013). For the purpose of this analysis, a hazardous waste site is an area that has been affected by a release of hazardous waste into soil, groundwater, surface water, sediments, and/or air.

Two variables are particularly important when evaluating the potential for a waste site to affect or be affected by a proposed project: whether releases from a waste site have affected soil or groundwater and the proximity of the waste site to the proposed project. For example, a site located 1.75 miles from a proposed project that affects only the soil has little potential to affect or be affected by the proposed project. However, a site located 1.75 miles from a proposed project with a large contaminated groundwater plume may affect or be affected by the proposed project because groundwater will transport contaminants.

12.5.2.2 Data Collection

OEA identified hazardous wastes sites in the study area that could affect the proposed rail line by conducting environmental database searches. OEA reviewed environmental records compiled by Environmental Data Resources (EDR) (Appendix R, *Hazardous Waste Sites*), a firm that provides environmental risk information. EDR uses proprietary techniques to search federal, state, local, and other databases to obtain information on facilities that use, store, transport, or generate regulated substances. The EDR report identified all sites within the database records search area. OEA selected this search area to capture all waste sites that could affect or be affected by the build alternatives. Where rights-of-way were parallel but offset by a significant distance, OEA used a 3.5-mile-wide records search area. For example, the rights-of-way of the Tongue River Alternatives and Tongue River Road Alternatives are parallel but on opposite sides of the Tongue River for approximately 42 miles. These rights-of-way are separated by distances of up to 3 miles. The 3.5-mile-wide records study area ensures that all potential hazardous waste sites, including Superfund sites, landfills, and large-quantity waste generators, are identified.

As explained in Appendix R, *Hazardous Waste Sites*, the record search identified 144 sites that are listed in federal records, 168 sites that are listed in state or local records, 25 sites that are listed in EDR proprietary records,[1] and one site that is listed in a tribal record. The EDR report identified 765 "orphan" sites that have incomplete addresses and cannot be mapped precisely.[2] Because their locations are uncertain, OEA assumed that these orphan sites have not had significant releases that would be subject to regulatory oversight. Therefore, they were not included for further evaluation.

12.5.2.3 Data Screening

OEA focused on sites that are located within the 1,500-foot study area as well as sites outside the study area that could affect the study area (e.g., sites with a migrating groundwater plume). OEA determined that sites where hazardous wastes are stored or used in compliance with laws and regulations (e.g., the Resource Conservation and Recovery Act), large- and small-quantity generators, and underground storage tank (UST) sites would have negligible hazardous waste risks. OEA excluded these sites from further analysis. OEA also eliminated closed sites where remediation has been completed (e.g., contaminated soil or groundwater removal) from further analysis.

By applying these criteria, OEA reduced the number of potential hazardous waste sites to seven. All of these sites are located within the study area (Figure 12.5-1). OEA ranked these sites according to the criteria for high-, medium-, and low-risk sites to determine whether they could affect or be affected by construction or operation of the build alternatives.

[1] Many sites are listed in more than one database.

[2] This does not represent 765 unique sites. Many sites were duplicates where the site names and addresses were recorded in multiple ways.

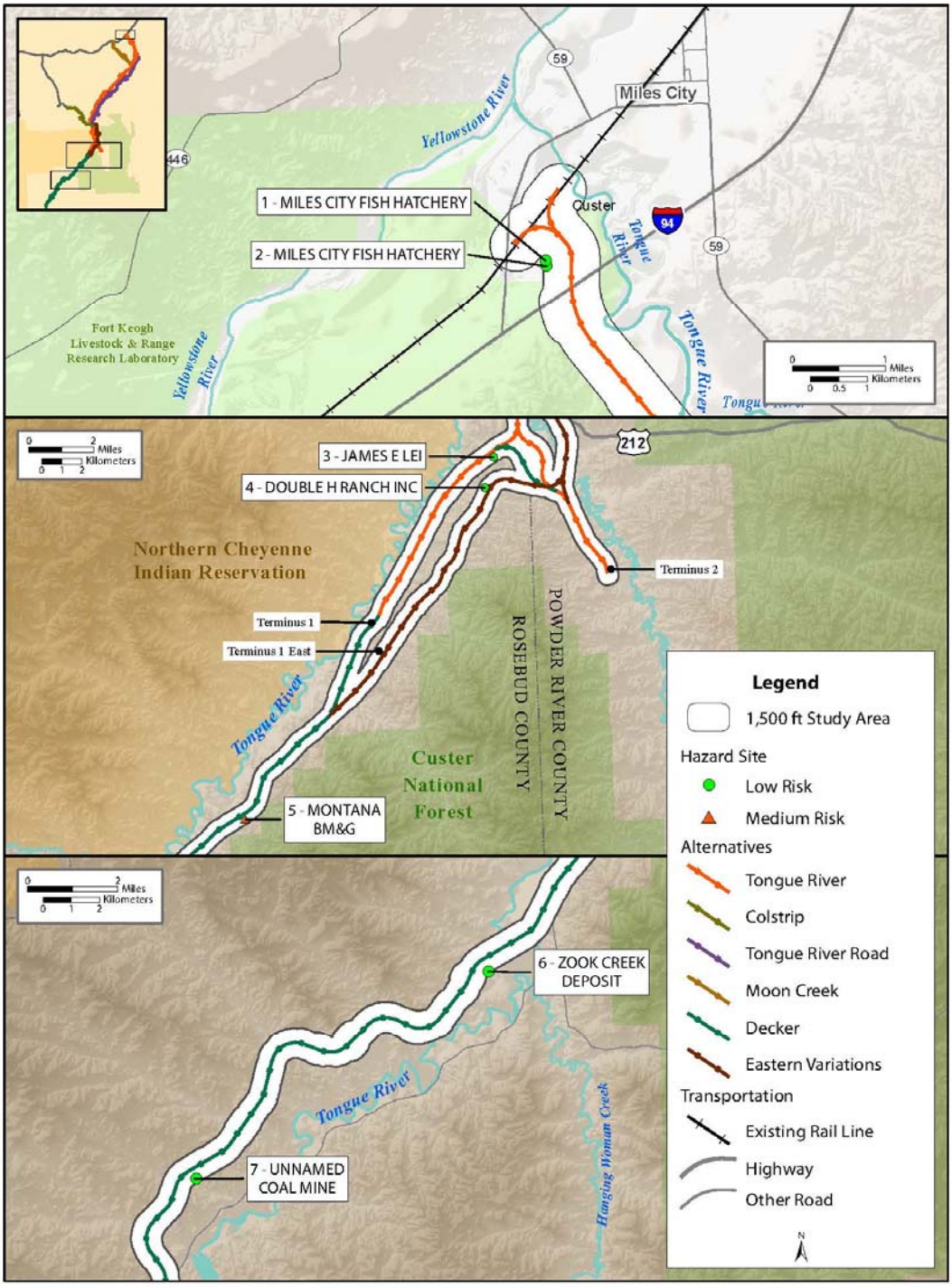

Figure 12.5-1. Hazardous Waste Sites

Criteria for high-risk sites:

- Both soil and groundwater have been affected, and groundwater flow is predominantly toward the rights-of-way of the build alternatives.
- Partially closed (e.g., soil cleanup has been completed) but has ongoing groundwater-focused remedial or monitoring activities planned.
- Located less than 500 feet from or within the rights-of-way of the build alternatives.

Criteria for medium-risk sites:

- Both soil and groundwater have been affected.
- Partially closed (e.g., soil cleanup has been completed) but has ongoing remedial or monitoring activities planned.
- Located within 500 to 1,000 feet of rights-of-way but outside of the rights-of-way.

Criteria for low-risk sites:

- Only soil has been affected; groundwater has not been affected.
- Closed by an oversight agency and with a status of no further action or no further remedial action planned. Closed sites generally do not pose a risk to health, safety, or the environment.
- Located more than 1,000 feet outside of the rights-of-way.

OEA did not identify any high-risk sites. OEA categorized six of the seven sites as low risk and one site as medium risk (Figure 12.5-1, Table 12.5-1). OEA then eliminated UST sites 1, 3, and 4 from further analysis because, in the absence of a reported release, these permitted UST sites pose a negligible risk. Additionally, OEA eliminated abandoned or inactive mine sites 5, 6 and 7 from further analysis because, similar to UST sites, in the absence of a reported violation, spill, or release, these sites pose a negligible risk.

12.5.3 Affected Environment

OEA eliminated UST Sites 1, 3, 4, 5, 6, and 7 from further analysis because they were listed as permitted UST sites and abandoned or inactive mines, which pose a negligible risk if no release has been reported. OEA identified one hazardous waste site in the study area. This site is located near, but not within, the rights-of-way of the Tongue River Alternatives and Tongue River Road Alternatives.

12.5.3.1 Site 2: Miles City Fish Hatchery

Site 2, the Miles City Fish Hatchery, is located on Fish Hatchery Road in Miles City, approximately 1,329 feet from the rights-of-way of the Tongue River Alternatives and Tongue River Road Alternatives. It is listed in the Facility Index Data System (FINDS) and

Table 12.5-1. Hazardous Waste Sites in the Study Area

Site	Business Name and Address	Nearest Build Alternatives	Distance from Rights-of-Way (feet)	Case Summary	Reason for Risk Class	Risk Class
1	Miles City Fish Hatchery, Miles City, MT	Tongue River Tongue River East Tongue River Road Tongue River Road East	1,392	UST site. One inactive tank. Status is closed.	Tank is inactive No violations reported. Closed site.	Low
2	Miles City Fish Hatchery, Fish Hatchery Road, Miles City, MT	Tongue River Tongue River East Tongue River Road Tongue River Road East	1,329	FINDS site. Reports regarding daily air and water quality data. LUST site. One reported violation November 28, 1989; resolved April 29, 1991. Status is inactive.	LUST violation was resolved in 1991. Site remains inactive.	Low
3	James E. Lei, 37 Taylor Creek Rd, Ashland, MT	Colstrip Moon Creek Tongue River Decker	682	UST site. One inactive tank. Status is closed.	Tank is inactive. No violations reported. No ongoing monitoring or remediation. Closed site.	Low
4	Double H Ranch Inc., Ashland, MT	Colstrip East Moon Creek East Tongue River East Decker East	418	UST site. One inactive tank. Status is closed.	Tank is inactive. No violations reported. No ongoing monitoring or remediation. Closed site.	Low
5	Montana BM&G, DH-3 Rosebud County, MT	Decker Decker East	802	Mine site. Abandoned or inactive coal mine.	Inactive coal mine.	Medium
6	Zook Creek Deposit, Rosebud County, MT	Decker Decker East	1,369	Mine site. Abandoned or inactive coal mine.	Inactive coal mine.	Low
7	Unnamed Coal Mine, Rosebud County MT	Decker Decker East	1,081	Mine site. Abandoned or inactive coal mine.	Inactive coal mine.	Low

Notes:
FINDS = Facility Index Data System; LUST = leaking underground storage tank; UST = underground storage tank

Montana Leaking Underground Storage Tank (LUST) databases. The site had one reported violation on November 28, 1989, which was resolved on April 29, 1991. No other violations have been reported, and the status of the site is inactive.

12.5.4 Environmental Consequences

Impacts on hazardous waste sites may result from construction and operation of the build alternatives. In this section, the impacts common to all build alternatives are presented first, followed by impacts specific to each build alternative.

12.5.4.1 Impacts Common to All Build Alternatives

No impacts are common to all build alternatives.

12.5.4.2 Impacts by Build Alternative

The following sections present impacts specific to the Tongue River Alternatives and Tongue River Road Alternatives. There are no impacts related to hazardous waste sites specific to the Colstrip Alternatives, Moon Creek Alternatives, or Decker Alternatives.

Tongue River Alternatives

Tongue River Alternative

The Tongue River Alternative right-of-way would be located 1,329 feet from Site 2, the Miles City Fish Hatchery. This site had a reported leaking UST in November 1989; the incident was resolved in April 1991. No further violations have been reported, and the site is listed as inactive. TRRC would implement project design measures to balance cut-and-fill quantities so that all fill material requirements could be met within the right-of-way without requiring excavation outside of the right-of-way. Therefore, construction and operation of the Tongue River Alternative would not affect or be affected by Site 2, and no impacts would occur.

Tongue River East Alternative

The Tongue River East Alternative would be located 1,329 feet from Site 2, the Miles City Fish Hatchery. As described above for the Tongue River Alternative, construction and operation of the Tongue River East Alternative would not affect or be affected by Site 2, and no impacts would occur.

Tongue River Road Alternatives

Tongue River Road Alternative

The Tongue River Road Alternative would be located 1,329 feet from Site 2, the Miles City Fish Hatchery. As described above for the Tongue River Alternative, construction and

operation of the Tongue River Road Alternative would not affect or be affected by Site 2, and no impacts would occur.

Tongue River Road East Alternative

The Tongue River Road East Alternative would be located 1,329 feet from Site 2, the Miles City Fish Hatchery. As described above for the Tongue River Alternative, construction and operation of the Tongue River Road East Alternative would not affect or be affected by Site 2, and no impacts would occur.

12.5.4.3 No-Action Alternative

Under the No-Action Alternative, TRRC would not construct or operate the proposed Tongue River Railroad, and there would be no impacts on hazardous waste sites from construction or operation of the proposed rail line or impacts on the proposed rail line as a result of proximity to hazardous waste sites.

12.5.4.4 Mitigation and Unavoidable Environmental Consequences

OEA is not recommending mitigation measures for impacts on hazardous waste sites. However, TRRC has proposed two voluntary measures (Chapter 19, Section 19.2.9, *Land Resources*) to implement, in coordination with BNSF, a spill prevention plan for oil or other petroleum projects; and to dispose of production waste in compliance with all applicable regulations. OEA concludes that there would be no impacts on or from hazardous waste sites.

12.6 Applicable Regulations

Different federal, state, and local entities are responsible for the regulation of land resources. These jurisdictions and the regulations and guidance related to land resources are summarized in Table 12.6-1.

Table 12.6-1. Regulations and Guidance Related to Land Resources

Regulation	Explanation
Federal	
National Environmental Policy Act (42 U.S.C. § 4321 *et seq*.)	Requires the consideration of potential environmental effects, including potential effects of (or on) contaminated sites in the environmental impact statement for any proposed major federal agency action. NEPA implementation procedures are set forth in the President's Council on Environmental Quality's Regulations for Implementing NEPA (40 C.F.R. Part 1500).
Federal Land Policy and Management Act of 1976 (43 U.S.C. § 1701 *et seq.*)	Gives USDOI the authority to regulate the use, occupancy, and development of public lands and to prevent unnecessary or undue degradation of public lands. BLM would be required to issue a right-of-way grant to TRRC before a rail line could cross BLM land. Gives USDA the authority to issue linear right-of-way grants, required for construction through Fort Keogh. Section 603 authorizes BLM to "establish policy and guidance to support the management and protection of Wilderness Study Areas so as not to impair the suitability of such areas for preservation as wilderness."
Department of Transportation Act of 1966, Section 4(f) (49 U.S.C. § 1653(f))	Denies USDOT, FHWA, and other USDOT agencies right of approval of transportation projects under their jurisdiction requiring the use of publicly owned parks, recreation areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no prudent or feasible alternative; or the action includes all possible planning to minimize harm to the Section 4(f) property resulting from the transportation use. Section 4(f) would be applicable to the proposed rail line through the potential involvement of FHWA (Section 12.4, *Section 4(f) Resources*).
Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2003 (SAFETEA-LU), Section 6009(a) (23 U.S.C. § 138)	Amends Section 4(f) legislation to simplify the approval of projects that have *de minimis* impacts on resources protected by Section 4(f). A *de minimis* finding indicates that a project would have little or no influence on the activities, features, and/or attributes of the Section 4(f) resource.
The Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901)	Regulates the identification, generation, transportation, storage, treatment, and disposal of hazardous materials and wastes.
Amendments to the Resource Conservation and Recovery Act in 1984 (42 U.S.C.§ 6991)	Addresses prevention and cleanup of petroleum underground storage tank releases.
Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. § 9601 *et seq*.)	Regulates former and newly discovered uncontrolled waste disposal and spill sites identified on the national priority list of contaminated sites and under the Superfund cleanup program.

Regulation	Explanation
Clean Air Act (42 U.S.C. §§ 7401– 7671)	Protects the public from exposure to airborne contaminants known to be hazardous to human health. Under the act, USEPA established National Emissions Standards for Hazardous Air Pollutants, including asbestos.
Clean Water Act (42 U.S.C. §§ 1251–1387)	Regulates discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.
Safe Drinking Water Act and National Primary Drinking Water Regulations (40 C.F.R. Part 141)	Establishes national primary drinking water standards and regulates discharges of pollutants to aquifers.
Emergency Planning and Community Right-to-Know Act (40 C.F.R. Parts 350–372):	Applies to facilities that use hazardous substances in quantities that require reporting to emergency response officials.
Federal Insecticide, Fungicide, and Rodenticide Act of 1996 (7 U.S.C. § 136)	Regulates the manufacture, distribution, sale, and use of pesticides.
Toxic Substances Control Act of 1976 (15 U.S.C. § 2601)	Regulates the manufacture, storage, and disposition of chemical substances and/or mixtures.
State	
Montana Environmental Policy Act (75 MCA)	Provides for adequate review and interdisciplinary analysis of state actions that have an impact on Montana's human environment in order to ensure that environmental attributes are fully considered.
Administrative Rules of Montana Chapter 36: Natural Resources and Conservation (36 ARM)	Codifies DNRC's jurisdiction over land resources in the study area. DNRC is responsible for sustaining and improving the benefits derived from Montana's water, soil, forest, and rangeland. DNRC, acting as lead agency for other Montana State agencies, will ensure the state's environmental concerns are addressed in a manner consistent with the Montana Environmental Policy Act. Some build alternatives would cross state lands and require an easement from the State of Montana. DNRC's Land Trust Management Divisions, Real Estate Management Bureau reviews and processes applications for rights-of-ways and easements across lands and navigable waterways administered by the state.
Montana Growth Policy Statute (76-1-6 MCA)	Establishes minimum requirements for local growth policies oriented toward the future. Establishes actions to implement the growth policy.
Montana House Bill 778 (1991)	Established the Recreational Use Program, which authorizes legally accessible state trust lands to be used for licensed recreation activities. Most such activities are covered as "general recreational use" and require no permit, except for hunting, fishing, and trapping.
Montana Stream Access Law of 1985 (23-2-302 MCA)	Gives recreationists the right to use rivers and streams (up to the ordinary high-water mark) for water-related recreation; it does not allow them to enter posted lands bordering those streams or to cross private lands to gain access to streams. Under 23-2-312 MCA, the law allows the public to access surface water by way of public bridge, its right-of-way, or abutments as well as any county road right-of-way.
Powers of Commission (87-1-301 MCA)	Authorizes the Montana Fish, Wildlife & Parks Commission to establish the hunting, fishing, and trapping rules of Montana FWP. Authorizes jurisdiction over lands owned or controlled by Montana FWP and waters under the jurisdiction of FWP. Authorizes Montana FWP to establish the block management program.

Regulation	Explanation
Hunter Management and Hunter Access Programs Created—Private Landowner Assistance to Promote Public Hunting Access—Rules (87-1-265 MCA)	Authorizes Montana FWP to establish, in the block management program, "programs for landowner assistance that encourage public access to private and public lands for the purposes of hunting and may adopt rules to carry out program purposes."
Montana Open-Space Land and Voluntary Conservation Easement Act of 1975 as amended (76-6 MCA)	Allows organizations that meet the tax-exempt requirements of the Internal Revenue Code 501(c) and public agencies to hold conservation easements. Conservation easements may be granted in perpetuity or for a renewable term of no fewer than 15 years.
Powers and Duties (87-1-201 MCA)	Provides Montana FWP with the authority to protect, improve, and regulate the use of Montana's fish and wildlife resources for public benefit for the present and future.
Acquisition of Wildlife Habitat—Rules (87-1-241 MCA) and Funding for Wildlife Habitat (87-1-242 MCA)	Gives Montana FWP specific license revenues to secure wildlife habitat through lease, conservation easement, or fee title acquisition.
Hazardous Waste Management Act (75-10-401 *et seq*. MCA):	Controls the safe management of hazardous wastes and used oil as authorized by USEPA, administered by Montana DEQ.
Hazardous Waste Management (Title 17, 53 ARM)	Oversees all hazardous wastes generated in or transported to Montana for storage, treatment, and disposal or for resource conservation or recovery.
State Participation in CERCLA (75-10-601 *et seq*. MCA)	Protects public health, safety, and welfare through cooperation with the federal government under CERCLA to dispose and control hazardous substances and contaminants in a safe and environmentally sound manner.
Montana Comprehensive Environmental Cleanup and Responsibility Act (75-10-701 *et seq*. MCA)	Encourages private parties to clean up sites at which releases of hazardous or deleterious substances have occurred, and provides funding to study, plan, and undertake the rehabilitation, removal, and cleanup of sites at which no voluntary action has been taken.
Underground Storage Tank Act (75-11-501 *et seq*. MCA)	Authorizes Montana DEQ to establish, administer, and enforce an underground storage tank leak prevention program for regulated substances under the federal RCRA.
Montana Underground Storage Tank Program	Authorizes Montana DEQ to oversee and ensure that underground storage tanks are designed and constructed to industry standards; installations, repaired and removed by qualified individuals; operated and monitored for releases; and properly decommissioned and assessed for contamination.
Montana Water Quality Act (75-5-101 *et seq*. MCA)	Authorizes Montana DEQ to administer a Water Quality Act Program that is responsible for oversight of remediation at sites contaminated with petroleum, pesticides and solvents. Authorizes Montana DEQ to administer the Groundwater Remediation/Water Quality Act Program, which is responsible for oversight of remediation at sites contaminated with petroleum, pesticides, and solvents.
County Planning and Zoning Commission Act (76-2-101 MCA) and Municipal Zoning Enabling Act (76-2-301 MCA)	Authorize local governments to prepare and adopt regulations to guide the growth and development of the communities they serve and provide counties and municipalities with the authority to adopt and enforce zoning ordinances that are commensurate with the growth policy.
Local	
Miles City Zoning Code 2013-02	Sets forth the jurisdiction of the Miles City zoning commission, covering the city limits plus 2 miles. Defines and regulates land use.

Regulation	Explanation
Title 8 of Colstrip City Ordinance 2013-02	Promulgates and adopts regulations consistent with goals for land use, city planning, and growth. The authority of the Municipal Zoning Enabling Act grants the City of Colstrip the authority to implement zoning regulations within the city limits.

Notes:
U.S.C. = United States Code; NEPA = National Environmental Policy Act; C.F.R. = Code of Federal Regulations; USDOI = U.S. Department of the Interior; BLM = Bureau of Land Management; TRRC = Tongue River Railroad Company; USDA = U.S. Department of Agriculture; Fort Keogh = Fort Keogh Livestock and Range Research Laboratory; USDOT = U.S. Department of Transportation; FHWA = Federal Highway Administration; SAFETEA-LU = Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2003; USEPA = U.S. Environmental Protection Agency; MCA = Montana Code Annotated; ARM = Administrative Rules of Montana; DNRC = Department of Natural Resources Conservation; Montana FWP = Montana Fish, Wildlife & Parks; Montana DEQ = Montana Department of Environmental Quality; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; RCRA = Resource Conservation and Recovery Act